Structured Cabling Systems

Brand-Rex

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Our Business
Brand-Rex is a leading global supplier of structured cabling systems for data networks, and is a niche supplier of high performance cables for extreme environment applications.

Brand-Rex provides complete cabling systems that connect the IT equipment in our offices and datacentres – from patch cords and wall outlets seen in the office, to cable running under floors and above ceilings, to connectivity panels that interface with active equipment in the IT room. Within vast datacentres, hosting huge amounts of business-critical information, Brand-Rex offers industry-leading, high-speed and high-density solutions.

Our Company
Brand-Rex Limited was established in 1972, in Glenrothes, Scotland, where the company's head office remains today. Brand-Rex also has 14 global offices, a presence in over 45 countries worldwide and over 400 employees supporting a truly global customer base.

The core technologies provided by Brand-Rex include copper-based cabling systems, fibre optic cabling systems (including a unique air-blown fibre system) and an Intelligent Infrastructure & Management Solution that delivers full visibility and management capability to end user clients.

Brand-Rex solutions are delivered to market through a network of high-calibre service and installation partners. The company uses distribution specialists and an army of trained, accredited installers who ensure that the correct system solutions are deployed and installed every time. The company also engages with end users and their consultants directly to ensure the best mutual understanding of needs and capabilities is achieved.

Technology Leader
With an experienced, dedicated and expert design and development team, Brand-Rex is a strong and capable force that continues to challenge industry conventions.

Through sophisticated modelling techniques and advanced test laboratories, Brand-Rex has been able to develop some of the most sophisticated cable and connectivity solutions available.

The New Product Development process that Brand-Rex deploys is a rigorous one. Among other issues this process entails technology forecasting, customer clinics, competitor analysis, cross-functional teams and, of course, continued investment.

Brand-Rex's technical expertise is further evidenced through representation on standards committees, products that stand up to 3rd party scrutiny, a significant patents portfolio, industry-recognised training courses and professional engagement with the industry's leading consultants.

Technical Service and Support
Brand-Rex has a dedicated and experienced technical support team that is led from head office and located throughout the world to support our global customers. This team's purpose is to deliver training and technical support to installation partners and end users in the design, deployment and commissioning of their high-performance data networks.

The rigid training and accreditation of installers, combined with validation of installation test results, allows Brand-Rex to offer end users a 25-year product and lifetime application warranty that remains one of the best in the industry.

Best in Class Manufacturing
Brand-Rex has long been known for its high quality manufacturing capabilities.

Having declared a commitment to maintaining cable production within the UK, Brand-Rex has invested £10 million in the creation of a new data cabling factory at the Glenrothes site enabling the company to compete on the global stage against manufacturers in lower cost countries. The investment program was completed in 2007 and the result is a factory that can rival any in the world.

This manufacturing facility and the 'Speciality Cable' plant at Leigh, near Manchester, both hold ISO 9001:2000 quality certification and environment accreditation to ISO:14000.

Customer Service - Brand-Rex has a mission: 'To be a market leader in Customer Service.'

"So, whether it's the ease of gaining information, the way that we talk to our customers, our ability to provide the right products when required, or how flexible we are to your own special needs, Brand-Rex is determined to surpass your expectations. As members of The Institute of Customer Service, we know the benchmark that we must surpass. We are implementing some rigorous assessment and training within every area of our business to ensure that no matter what we do, we beat your expectations.

We think you will notice the difference."

Structured cabling systems of today and in the future structured cabling world have to cope with the ever-growing demands of greater and greater bandwidth absorption within the local area network. All Brand-Rex copper systems provide the IT Manager with a complete open cabling system from the PBX point of entry, to building distribution, to floor distribution, to wiring closet, to wall outlets, and ultimately to the desk.

The Brand-Rex product range is system based, with each system containing full connectivity comprising of cable, patch panels, wall outlets and patch cords supporting VoIP and Power over Ethernet.

A premier grade cabling system needs standards compliant components, and that is what Brand-Rex systems offer. The proof of this is in the overall link and channel performance, which is the only parameter that the transmission equipment is going to see. GigaPlus, Cat6Plus and 10GPlus components are engineered to achieve **guaranteed channel performance**.

Brand-Rex Copper Systems Support all Protocols of defined international standards including:

- IEEE802.3ab
- 10 Gigabit Ethernet (IEEE 802.3an)
- ATM 1200
- ANSI/TIA/EIA 854

Third party independent certificates of compliance are available for component and channel performance from 3P Inc. and GHMT Laboratories GmbH for GigaPlus, Cat6Plus, 10GPlus and U-MediaPlus.

- GigaPlus exceeds the requirements of ISO/IEC 11801 : 2002, EN 50173-1 : 2002 for Class D channels and ANSI/TIA/EIA 568B.2 : 2002 Category 5e.

- Cat6Plus exceeds the requirements of ISO/IEC 11801 : 2002, EN 50173-1 : 2002 for Class E channels and ANSI/TIA/EIA 568B.2.1 : 2002 Category 6.

- 10GPlus exceeds the requirements of ISO/IEC 11801 : 2002 Amm 1.1, EN 50173-1 : 2002 ed2 for Class EA channels and ANSI/TIA/EIA 568B.2.1 : 2002 Augmented Category 6.

- U-MediaPlus is a range of universal media cables that exceed the Category 7 requirements of ISO/IEC 11801: 2002 Class F and EN 50173-1 : 2002.

Cable Properties

A simple legend system has been adopted throughout this brochure. The detail listed here provides descriptions of the symbols used. These symbols describe the physical properties of the cable, and where cables are to be used.

Internal System

ISO/IEC 11801 Class D System
ANSI/TIA/EIA 568B Category 5e

ISO/IEC 11801 Class E System
ANSI/TIA/EIA 568B Category 6

ISO/IEC 11801 Class EA System
ANSI/TIA/EIA 568B Augmented Category 6

ISO/IEC 11801 Class F System
ANSI/TIA/EIA 568B Category 7

Unshielded
The cable is unshielded.

Foiled Pairs
A PET coated Aluminium foil is applied around the individual pairs.

Overall Foil
A PET coated Aluminium foil is applied around the 4 pair core construction.

Overall TCW Braid
The core construction is surrounded by an overall TCW braid.

Horizontal Cable
Suitable for installation in the horizontal plane of a structured wiring system.

Riser Cable
Suitable for installation in the risers and backbone areas within a structured wiring system.

Communications Room
Suitable for use in a communications room or consolidation point.

General Office Outlet
Suitable for general offfice use.

This product is available with an IEC 60332-1 flammability rating.

This product is available with an IEC 60332-3-24 flammability rating.

Voice over IP
Suitable for VoIP applications on enabled networks.

Power over Ethernet
Suitable for Power over Ethernet applications on enabled networks.

Waking up to a new era
10 Gigabit Ethernet over copper cabling systems have been heralded as the greatest technological revolution in networking since the birth of Ethernet.

The engineering science dedicated to overcoming the boundaries of convention should not be underestimated. Brand-Rex has dedicated a team of design engineers, technologists and laboratory technicians to developing the highest performance 10 Gigabit Ethernet solution on the market today.

High performance businesses need high performance networks
The use of increasingly sophisticated IT applications in modern, competitive business has driven the growth of Ethernet. What value is an enterprise application if the network hardware cannot support it? Whether your business uses demanding graphics based design packages, data hungry finance systems or emerging multi-media communication tools, they have one thing in common, a need for:

- Greater bandwidth
- Maximum transmission reliability
- Life long quality of operation
- Resilience against environmental challenges

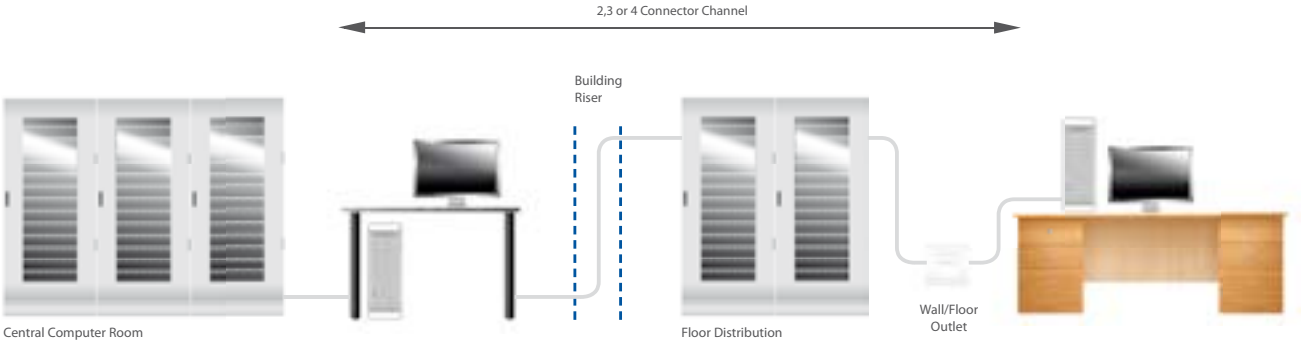
10 Gigabit Ethernet provides the next standard platform that will allow the continued growth of high performance business applications. Powerful IT networks, able to deliver the new 10GBASE-T protocol, require phenomenal processing power within active network switching and routing hardware. Such active hardware commands a very high price.

Yet this investment is pointless unless supported by an equally sophisticated cabling system. It is vital that you can trust the claims of any 10 Gigabit Ethernet cabling system since the choices made today will impact the business applications of tomorrow.

PRODUCT DESCRIPTION

The Brand-Rex 10GPlus product set is a premium quality, high performance, future proof, cabling system. 10GPlus is classified as an Augmented Category 6 and Class EA product set which is fully backward compatible to Category 6 (Class E) and Category 5e (Class D) solutions.

It is a product set which is designed to be compliant with the new IEC Class EA and TIA 568B.2-10 standards, ready for the new application from IEEE, 10GBASE-T. The cabling system is available in screened and unscreened solutions, however screened products are more robust against against electromagnetic noise and have improved alien crosstalk performance.



Channel Performance of 10GPlus

Channel Performance

Frequency (MHz)	Guaranteed Headroom to Class E	Typical Headroom to Class EA		1	4	10	16	100	250	300	400	500
Insertion Loss (dB/100m)	6%	2%	Spec	4.0	4.1	6.4	8.1	20.8	33.8	37.3	43.6	49.3
			Typical	2.1	4.0	6.3	7.9	20.4	33.1	36.6	42.8	48.4
NEXT (dB)	6	6	Spec	65.0	63.0	56.6	53.2	39.9	33.1	31.7	29.6	27.9
			Typical	78.8	69.3	62.9	59.7	46.6	40.0	38.6	36.5	34.9
PSNEXT (dB)	7.5	7	Spec	62.0	60.5	54.0	50.6	37.1	30.2	28.8	26.6	24.8
			Typical	77.7	67.9	61.3	57.9	42.2	37.2	35.8	33.6	31.8
ELFEXT (dB/100m)	8	9	Spec	63.3	51.2	43.3	39.2	23.3	15.3	13.7	11.2	9.3
			Typical	72.0	60.0	52.0	47.9	32.0	24.0	22.5	20.0	18.0
PSELFEXT (dB/100m)	9	10	Spec	60.3	48.2	40.3	36.2	20.3	12.3	10.7	8.2	6.3
			Typical	70.0	58.0	50.0	45.9	30.0	22.0	20.5	18.0	16.0
Return Loss (dB/100m)	3	4	Spec	19.0	19.0	19.0	18.0	12.0	8.0	8.0	8.0	8.0
			Typical	23.0	23.0	23.0	22.0	16.0	12.0	12.0	12.0	12.0
ACR (dB/100m)	9	6	Typical	76.6	65.3	56.7	51.7	26.3	6.8	2.1	-6.3	-13.5
PSACR (dB/100m)	10	7	Typical	75.6	63.9	55.0	49.9	23.9	4.1	-0.8	-9.2	-16.5

Unscreened Systems

Frequency (MHz)	Guaranteed Headroom to Class E	Typical Headroom to Class EA			4	10	16	100	250	300	400	500
PSANEXT (dB)	-	3	Spec	67.0	67.0	67.0	67.0	60.0	54.0	52.8	51.0	49.5
			Typical	83.0	77.0	73.0	71.0	63.0	57.0	55.8	54.0	52.5
PSAELFEXT (dB)	-	5	Spec	67.0	65.0	57.0	52.9	37.0	29.0	27.5	25.0	23.0
			Typical	82.0	70.0	62.0	57.9	42.0	34.0	32.5	30.0	28.0

Screened Systems

Frequency (MHz)	Guaranteed Headroom to Class E	Typical Headroom to Class EA		1	4	10	16	100	250	300	400	500
PSANEXT (dB)	-	10	Spec	67.0	67.0	67.0	67.0	60.0	54.0	52.8	51.0	49.5
			Typical	90.0	84.0	80.0	78.0	70.0	64.0	62.8	61.0	59.5
PSAELFEXT (dB)	-	10	Spec	67.0	65.0	57.0	52.9	37.0	29.0	27.5	25.0	23.0
			Typical	87.0	75.0	67.0	62.9	47.0	39.0	37.5	35.0	33.0

Spec = FPDAM 1.1 to ISO/IEC 11801:2002

Designed to be compliant with the following draft standards:

- **ISO 11801:2002 Amm1.1, ISO 61156-5 ed 2, EN 50173-1 ed2 EN 50288-10-1, ANSI/TIA/EIA 568B.2-10**

Cable Standards

The cable is backwards compatible with:

- **ISO 11801:2002, ISO 61156-5, EN 50173-1:2002, EN 50288-6-1, ANSI/TIA/EIA 568B, ANSI/TIA/EIA 568B.2-1**

Brand-Rex Copper Cables - 10GPlus

Communication Cable, U/UTP, 100 Ω, 4x2,AWG23/1

Electrical Characteristics @ 20°c	Specification	Typical Performance
Conductor Loop Resistance	Max 19Ω / 100m	Max 19Ω / 100m
Conductor Resistance Unbalance	Max 2%	0.5%
Dielectric Strength	1.0kV dc or 0.7kV ac for 1 min	100% in process test
Insulation Resistance	>500 MΩ.km @ 100-500 V test voltage	>5 GΩ.km
Capacitance Unbalance to Earth	<120 pF/100m	40 pF/100m
Velocity of Propagation	<534 nsec/100m @ 100Mhz	<490 nsec/100m @ 100Mhz (NVP for hand testers = 0.67)
Skew	Max 40ns/100m @ 100Mhz	Max 30ns/100m @ 100Mhz
Mean Characteristic Impendance	100+/-5 Ω @ 100Mhz	100+/-5 Ω @100Mhz
Coupling Attenuation up to 1Ghz	Min 40dB	56dB

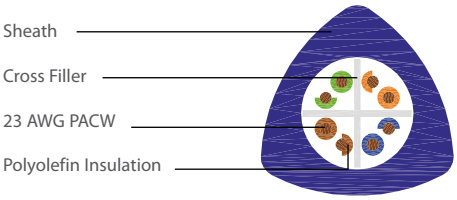
Characteristic	Typical Headroom vs Cat6 (250MHz)	Typical Headroom vs AC6 (500MHz)
Return Loss	5dB	5dB
Insertion Loss	6%	2%
NEXT	10dB	10dB
PSNEXT	10dB	20dB
ELFEXT	12dB	12dB
PSELFEXT	12dB	12dB
PSANEXT	NA	5dB
PSAELFEXT	NA	6dB

Typical headroom on key S/N characteristics - for information only

	Typical Headroom vs Cat6 (250MHz)	Typical Headroom vs AC6 (500MHz)
PSACR @ 500MHz	NA	0dB
PSAACR* @ 500MHz	NA	13dB

* Power Sum Attenuation to Alien Crosstalk (near end) Ratio
The Alien crosstalk performance of cables is assessed using a '6 round 1' or '4 on a drum' method.

Part Number	AC6U - HF1	AC6U - HF3
Outer Sheath	LSZH	LSZH
Construction	Simplex	Simplex
Cable Weight	79 kg/km	81 kg/km
Calorific Value	32 kJ/m	41 kJ/m
Effective Diameter	8.5mm	8.5mm
Sheath Colour	Voilet RAL 4005	Blue RAL 5015
Fire Safety Rating	IEC 60332 - Part 1	IEC 60332 - Part 3c
Acid Gas Emmisons	IEC 60754 - 1	IEC 60754 - 1
Smoke Index	IEC 61034	IEC 61034
Packaging Unit	WRL	WRL



PRODUCT DESCRIPTION:

10GPlus U/UTP, 100 Ohm, 4x2,AWG23/1 is a premium grade Class EA / Augmented Category 6 cable to support 10 Gigabit Ethernet protocol for installation in horizontal and backbone applications.

PRODUCT PERFORMANCE:

Core

Conductor:	23 AWG Plain Annealed Copper Wire
Insulation:	Polyolefin
Diameter:	1.06mm Nominal
Pair:	2 of the above cores
Pair Colour:	Blue - White, Orange - White Green - White, Brown - White

Final Assembly

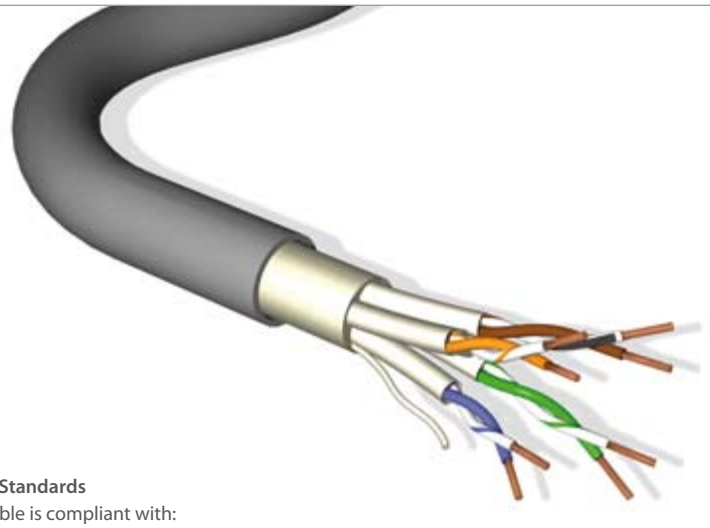
Cable:	4 of the above pairs cabled together around a cross filler
Sheath:	PVC or LSZH compound

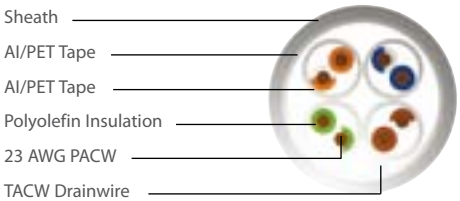
Mechanical and Environmental

Temp - Installation:	0C to 50C
Temp - Operation:	-20C to 75C
Max Tensile Load:	10kg per cable
Min Bend Radius:	8 x Effective Diametre (installation)
Min Bend - Operation:	4 x Effective Diametre (operation)

Packaging

WRL	500m Wooden Reel 4 per Pallet 1000m Wooden Reel 2 per Pallet





Cable Standards

The cable is compliant with:

- **ISO 11801:2002, ISO 61156-5, EN 50173-1:2002, EN 50288-5-1 ANSI/TIA/EIA 568B, ANSI/TIA/EIA 568B.2-1**

It is also designed to be compliant with the following draft standards when they are published:

- **ISO 11801:2002 Amm1.1, ISO 61156-5 ed 2 , EN 50173-1 ed2 EN 50288-10-1, ANSI/TIA/EIA 568B.2-10**

Brand-Rex Copper Cables - 10GPlus

Communication Cable, F/FTP, 100 Ω, 4x2xAWG 23/1

Electrical Characteristics @ 20°c	Specification	Typical Performance
Conductor Loop Resistance	Max 19 Ω / 100m	14 Ω / 100m
Conductor Resistance Unbalance	Max 2%	0.5%
Dielectric Strength	1.0kV dc or 0.7kV ac for 1 min	100% in process test
Insulation Resistance	>500MΩ @ 100-500 V test voltage	>5 GΩ.km
Capacitance Unbalance to Earth	Max 120 pF/100m	80 pF/100m
Velocity of Propagation	<537.6 nsec/100m @ 100MHz	445 nsec/100m @ 100MHz (NVP for hand held testers = 0.74)
Skew	Max 20 nsec/100m @ 100MHz	5 nsec/100m @ 100MHz
Mean Characteristic Impendance	100 Ω +/- 5 Ω @ 100MHz	100 Ω +/- 3 Ω @ 100MHz
Transfer Impendance	Max 100 mΩ/m @ 10MHz	25 mΩ/m @ 10MHz (ISO 61156 grade 1 cable)
Coupling Attenuation up to 1Ghz	Min 55 dB	75 dB

Characteristic	Typical Headroom vs Cat6 (250MHz)	Typical Headroom vs AC6 (500MHz)
Return Loss	5dB	5dB
Insertion Loss	6%	2%
NEXT	20dB	20dB
PSNEXT	20dB	20dB
ELFEXT	15dB	15dB
PSELFEXT	15dB	15dB
PSANEXT	NA	10dB
PSAELFEXT	NA	10dB

Typical headroom on key S/N characteristics - for information only

	Typical Headroom vs Cat6 (250MHz)	Typical Headroom vs AC6 (500MHz)
PSACR @ 500MHz	NA	35dB
PSAACR* @ 500MHz	NA	20dB

* Power Sum Attenuation to Alien Crosstalk (near end) Ratio
The Alien crosstalk performance of cables is assessed using a '6 round 1' or '4 on a drum' method.

Product Part Numbering

Part Number	AC6F/FTP-HF1	AC6F/FTP-HF3
Outer Sheath	LSZH	LSZH
Construction	Simplex	Simplex
Cable Weight	50.1 kg/km	56.4 kg/km
Calorific Value	0.20 k Wh/m	0.21 k Wh/m
Outer Diameter (nom)	7.3mm	7.7mm
Sheath Colour	Violet RAL 4005	Blue RAL 5015
Fire Safety Rating	IEC 60332-1-2	IEC 60332-3-24
Acid Gas Emissions	IEC 60754-1	IEC 60754-1
Smoke Index	IEC 61034	IEC 61034
Packaging	WRL	WRL

Independent 3rd Party Certification (3P)

PRODUCT DESCRIPTION:

10GPlus F/FTP, 100 Ω, 4x2xAWG 23/1 is a premium grade Class EA / Augmented Category 6 cable to support 10 Gigabit Ethernet protocol for installation in horizontal and backbone areas.

PRODUCT PERFORMANCE:

Core

Conductor:	23 AWG Plain Annealed Copper Wire
Insulation:	Cellular Polyolefin
Diameter:	1.45mm Nominal
Pair:	2 of the above cores
Tape Screen:	Individual pair wrapped with aluminium polyester tape, applied metal side out
Pair Colour:	Blue-White, Orange-White, Green-White, Brown-White

Final Assembly

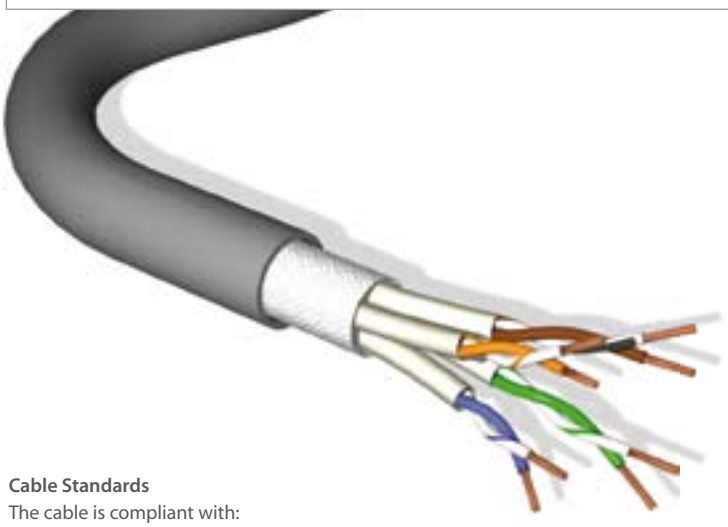
Cable:	4 of the above shielded pairs
Drainwire:	0.5mm Tinned Annealed Copper Wire
Tape Screen:	Wrapped with aluminium polyester tape, applied metal side in
Sheath:	PVC or LSZH compound

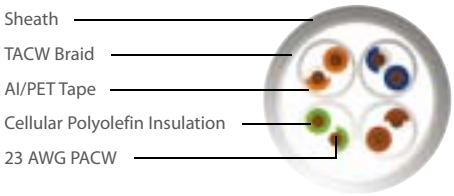
Mechanical and Environmental

Temp - Installation:	0°c to +50°c
Temp - Operation:	-20°c to +75°c
Max Tensile Load:	10kg per simplex cable (installation)
Min Bend Radius:	8 x Outer Diameter (installation) 4 x Outer Diameter (operation)

Packaging

WRL	500m Wooden Reel 1000m Wooden Reel





Cable Standards

The cable is compliant with:

- **ISO 11801:2002, ISO 61156-5, EN 50173-1:2002, EN 50288-5-1 ANSI/TIA/EIA 568B, ANSI/TIA/EIA 568B.2-1**

It is also designed to be compliant with the following draft standards when they are published:

- **ISO 11801:2002 Amm1.1, ISO 61156-5 ed 2 , EN 50173-1 ed2 EN 50288-10-1, ANSI/TIA/EIA 568B.2-10**

Brand-Rex Copper Cables - 10GPlus

Communication Cable, S/FTP, 100 Ω, 4x2xAWG 23/1

Electrical Characteristics @ 20°c	Specification	Typical Performance
Conductor Loop Resistance	Max 19 Ω / 100m	14 Ω / 100m
Conductor Resistance Unbalance	Max 2%	0.5%
Dielectric Strength	1.0kV dc or 0.7kV ac for 1 min	100% in process test
Insulation Resistance	>500MΩ @ 100-500 V test voltage	>5 GΩ.km
Capacitance Unbalance to Earth	Max 120 pF/100m	80 pF/100m
Velocity of Propagation	<537.6 nsec/100m @ 100MHz	445 nsec/100m @ 100MHz (NVP for hand held testers = 0.74)
Skew	Max 20 nsec/100m @ 100MHz	5 nsec/100m @ 100MHz
Mean Characteristic Impendance	100 Ω +/- 5 Ω @ 100MHz	100 Ω +/- 3 Ω @ 100MHz
Transfer Impendance	Max 100 mΩ/m @ 10MHz	25 mΩ/m @ 10MHz (ISO 61156 grade 1)
Coupling Attenuation up to 1Ghz	Min 55 dB	90 dB

Characteristic	Typical Headroom vs Cat6 (250MHz)	Typical Headroom vs AC6 (500MHz)
Return Loss	5dB	5dB
Insertion Loss	6%	2%
NEXT	20dB	20dB
PSNEXT	20dB	20dB
ELFEXT	15dB	15dB
PSELFEXT	15dB	15dB
PSANEXT	NA	10dB
PSAELFEXT	NA	10dB

Typical headroom on key S/N characteristics - for information only

	Typical Headroom vs Cat6 (250MHz)	Typical Headroom vs AC6 (500MHz)
PSACR @ 500MHz	NA	35dB
PSAACR* @ 500MHz	NA	20dB

* Power Sum Attenuation to Alien Crosstalk (near end) Ratio
The Alien crosstalk performance of cables is assessed using a '6 round 1' or '4 on a drum' method.

Product Part Numbering

Part Number	AC6S/FTP-HF1	AC6S/FTP-HF3
Outer Sheath	LSZH	LSZH
Construction	Simplex	Simplex
Cable Weight	64.1 kg/km	65.1 kg/km
Calorific Value	0.19 k Wh/m	0.2 k Wh/m
Outer Diameter (nom)	7.5mm	7.8mm
Sheath Colour	Violet RAL 4005	Blue RAL 5015
Fire Safety Rating	IEC 60332-1-2	IEC 60332-3-24
Acid Gas Emissions	IEC 60754-1	IEC 60754-1
Smoke Index	IEC 61034	IEC 61034
Packaging	WRL	WRL

Independent 3rd Party Certification (3P)

PRODUCT DESCRIPTION:

10GPlus S/FTP, 100 Ω, 4x2xAWG 23/1 is a premium grade Class EA / Augmented Category 6 cable to support 10 Gigabit Ethernet protocol for installation in horizontal and backbone areas.

PRODUCT PERFORMANCE:

Core

Conductor:	23 AWG Plain Annealed Copper Wire
Insulation:	Cellular Polyolefin
Diameter:	1.45mm Nominal
Pair:	2 of the above cores
Tape Screen:	Individual pair wrapped with aluminium polyester tape, applied metal side out
Pair Colour:	Blue-White, Orange-White, Green-White, Brown-White

Final Assembly

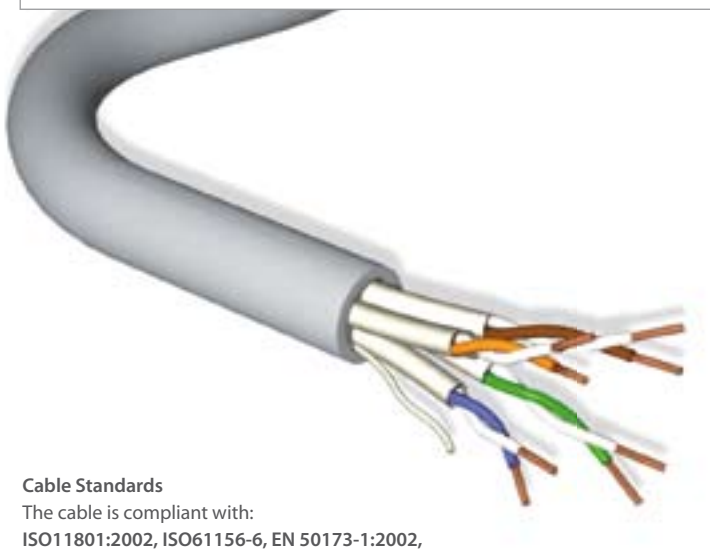
Cable:	4 of the above shielded pairs
Braid Screen:	0.127mm Tinned Annealed Copper Wire
Sheath:	PVC or LSZH compound

Mechanical and Environmental

Temp - Installation:	0°c to +50°c
Temp - Operation:	-20°c to +75°c
Max Tensile Load:	10kg per simplex cable (installation)
Min Bend Radius:	8 x Outer Diameter (installation) 4 x Outer Diameter (operation)

Packaging

WRL	500m Wooden Reel 1000m Wooden Reel



Cable Standards
The cable is compliant with:
ISO11801:2002, ISO61156-6, EN 50173-1:2002, EN 50288-5-2 ANSI/TIA/EIA568B, ANSI/TIA/EIA568B.21, ANSI/TIA/EIA568B.2-10
It is also designed to be compliant with the following draft standards when they are published:
• ISO11801:2002Amm2, ISO61156-6ed2, EN 50173-1ed2 EN 50288-10-2

Brand-Rex Copper Cables - 10GPlus Zone Cable

Communication Cable, U/FTP, 100 Ω, 4x2xAWG 26/1

Electrical Characteristics @ 20°c	Specification	Typical Performance
Conductor Loop Resistance	< 29 Ω / 100m	26
Conductor Resistance Unbalance	Max. 2%	0,5%
Dielectric Strength	1.0kV dc or 0.7kV ac for 1 min	100% in process test
Insulation Resistance	>5000M Ω/M @ 100-500 V test voltage	>5000M Ω /M
Capacitance Unbalance to Earth	Max. 160 pF/100m	60 pF/100m
Velocity of Propagation	<537.6 nsec/100m @ 100MHz	440 nsec/100m @ 100MHz (NVP for hand held testers = 0.74)
Skew	Max. 45 nsec/100m @ 100MHz	5 nsec/100m @ 1100MHz
Mean Characteristic Impendance	100 Ω ± 5 Ω @ 100MHz	100 Ω +/- 3 Ω @ 100MHz

Characteristic	Typical Headroom vs Cat6 (250MHz)	Typical Headroom vs AC6 (500MHz)
Return Loss	5dB	5dB
Insertion Loss	20%	20%
NEXT	20dB	20dB
PSNEXT	20dB	20dB
ELFEXT	15dB	15dB
PSELFEXT	15dB	15dB
PSA ACR-N	NA	20dB
PSAACR-F	NA	20dB

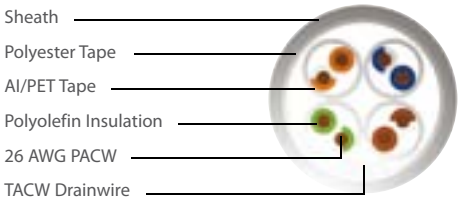
Typical headroom on key S/N characteristics - for information only

	Typical Headroom vs Cat6 (250MHz)	Typical Headroom vs AC6 (500MHz)
PSACR @ 500MHz	NA	35dB
PSAACR-N* @ 500MHz	NA	20dB

* Power Sum Attenuation to Alien Crosstalk (near end) Ratio
The Alien crosstalk performance of cables is assessed using a '6 round 1' or '4 on a drum' method.

Product Part Numbering

Part Number	AC6-DCZ
Outer Sheath	LSZH
Cable Weight	33 kg/km
Calorific Value	317 kj/m
Outer Diameter (nom)	5.4mm
Sheath Colour	Violet or Grey
Fire Safety Rating	IEC 60332-1-2
Acid Gas Emissions	IEC 60754-1
Smoke Index	IEC 61034
Packaging	WRL



PRODUCT DESCRIPTION:
10GPlus U/FTP, 100 Ω, 4x2xAWG 26/1 is a premium grade Class EA / Augmented Category 6 cable to support 10 Gigabit Ethernet protocol for use within the data centre environment.

PRODUCT PERFORMANCE:

Core

Conductor:	26 AWG Plain Annealed Copper Wire
Insulation:	Cellular Polyolefin
Diameter:	0.99mm Nominal
Pair:	2 of the above cores
Tape Screen:	Individual pair wrapped with aluminium polyester tape applied metal side out
Pair Colour:	Blue-White, Orange-White Green-White, Brown-White

Final Assembly

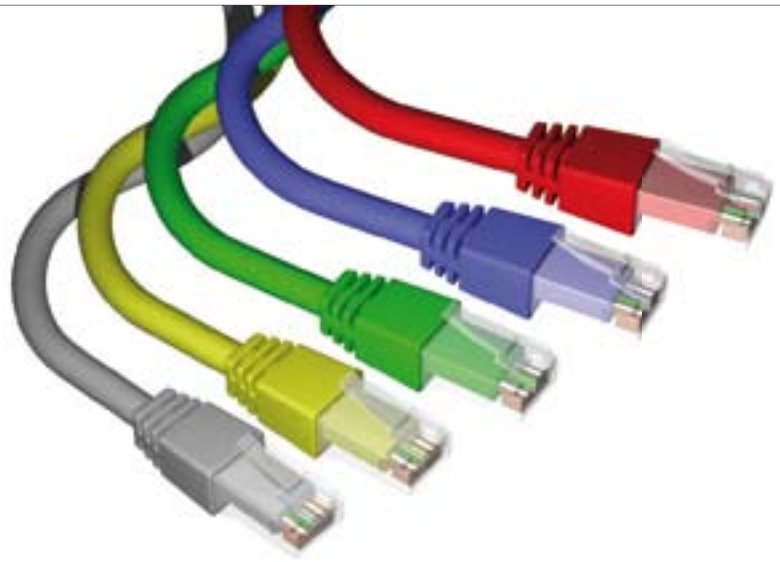
Cable:	4 of the above shielded pairs
Drainwire:	0.5mm Tinned Annealed Copper Wire
Sheath:	LSZH compound

Mechanical and Environmental

Temp-Installation:	0°c to +50°c
Temp-Operation:	-20°c to +75°c
Max Tensile Load:	10kg per simplex cable (installation)
Min Bend Radius:	8 x Outer Diameter (installation) 4 x Outer Diameter (operation)

Packaging

WRL	500m Wooden Reel 1000m Wooden Reel



Brand-Rex Copper Patch Cords - 10GPlus

Augmented Category 6 Blade Server Patch Cords

PRODUCT DESCRIPTION:

The Brand-Rex Augmented Category 6 patch cord is part of the Brand-Rex 10GPlus cabling system. The 10GPlus cabling system is comprised of high performance cables and connectivity which not only provide a reliable platform for all of today's network applications, but is also designed to future-proof networks for the emerging, new higher speed protocols of tomorrow, such as 10GBASE-T. The 10GPlus system is classified as an Augmented Category 6 and Class EA product set that is fully backward compatible to Category 6 (Class E) and Category 5e (Class D) products.

Packaging

- Individually packed in branded, easy tear bags
- Individual bagged parts, bulk packed in bags of 10 for standard cords

Applications

- Wall and multi-user outlets
- Patch panel and consolidation points
- Blade servers, hubs and switches

Mechanical Specifications

Dimensions

- Nominal Cable Diameter: Stranded - 6.0mm
- Length Tolerance: (bracketed length) ± 1%

Environmental Conditions

- Operating temperature from -0ºC to 50ºC at 93% relative humidity, non condensing
- Storage temperature from -20ºC to 70ºC

Part Number Format

AC6C-PC-A-bbb-cde-F

A - Cord Type	bbb - Cord Length	cde - Colour Scheme			F - Speciality Tag
		(c) Cable	(d) Boot 1	(e) Boot 2	
U 24AWG UTP	020 2 metre	1 Red	1 Red	1 Red	X Crossover
S 27AWG STP	030 3 metre	4 Blue	4 Blue	4 Blue	HB Halogen Free
	050 5 metre	5 Green	5 Green	5 Green	
	Additional lengths on request	6 Yellow	6 Yellow	6 Yellow	
		8 Grey	8 Grey	8 Grey	
		Additional colours on request			

Product Part Numbering

	Red	Blue	Green	Yellow	Grey
24 AWG UTP - 2.0m	AC6PCU020-188HB	AC6PCU020-488HB	AC6PCU020-588HB	AC6PCU020-688HB	AC6PCU020-888HB
24 AWG UTP - 3.0m	AC6PCU030-188HB	AC6PCU030-488HB	AC6PCU030-588HB	AC6PCU030-688HB	AC6PCU030-888HB
24 AWG UTP - 5.0m	AC6PCU050-188HB	AC6PCU050-488HB	AC6PCU050-588HB	AC6PCU050-688HB	AC6PCU050-888HB
27 AWG SFTP - 2.0m	AC6PCS020-188HB	AC6PCS020-488HB	AC6PCS020-588HB	AC6PCS020-688HB	AC6PCS020-888HB
27 AWG SFTP - 3.0m	AC6PCS030-188HB	AC6PCS030-488HB	AC6PCS030-588HB	AC6PCS030-688HB	AC6PCS030-888HB
27 AWG SFTP - 5.0m	AC6PCS050-188HB	AC6PCS050-488HB	AC6PCS050-588HB	AC6PCS050-688HB	AC6PCS050-888HB

Non standard colour and length options are available to order on request.

Brand-Rex Patch Cords - 10GPlus

Augmented Category 6 Patch Cords

Product Part Numbering

Description	Part Number
27 AWG LSOH Patchcord 1m (1.0m)	AC6PCG010-x88HB
27 AWG LSOH Patchcord 2m (2.1m)	AC6PCG020-x88HB
27 AWG LSOH Patchcord 3m (3.0m)	AC6PCG030-x88HB
27 AWG LSOH Patchcord 5m (5.0m)	AC6PCG050-x88HB

x = standard range of colours = Red (188), Blue (488), Green (588), Yellow (688) and Grey(888)

Note:- Boots are only available in Slate Grey.
If boot colouring is required, a Retrofit coloured boot clip can be purchased separately.
(Brand-Rex ref:-MMCPCCHBz Where z = 1= Red, 4 = Blue 5 = Green 6 =Yellow)

Part Number Format

AC6PC-A-bbb-cde-F

Cord Type Standard	bbb - Cord Length	cde - Colour Scheme			f - Speciality Tag
A 27 AWG	**010** 1 metre	(c) Cable	(d) Boot 1	(e) Boot 2	X crossover
	015 1.5 metre	1 Red	**1** Red	**1** Red	H Halogen free
	020 2 metre	4 Blue	**4** Blue	**4** Blue	B Blade server compatible
	030 3 metre	5 Green	**5** Green	**5** Green	
		6 Yellow	**6** Yellow	**6** Yellow	
		Non STD cable colours are available upon request			

PRODUCT DESCRIPTION:

The Brand-Rex Augmented Category 6 patchcord is part of the new Brand-Rex 10GPlus cabling system. The 10GPlus cabling system is comprised of high performance cables and connectivity which not only provide a reliable platform for all of today's network applications, but is also designed to future-proof networks for the emerging, new, higher speed protocols of tomorrow, such as 10GBASE-T. The 10GPlus system is classified as an Augmented Category 6 and Class EA product set that is fully backward compatible to Cat6 (Class E) and Cat5e (Class D) products.

Packaging

- Individually packed in branded easy tear bags
- Individual bagged parts, bulk packed in bags of 10 for standard cord

Applications

- Wall & Multi-user Outlets
- Patch Panel & Consolidation Points
- Suitable to connect to Servers, Blade Servers, Hubs and Switches etc

Mechanical specifications

Dimensions

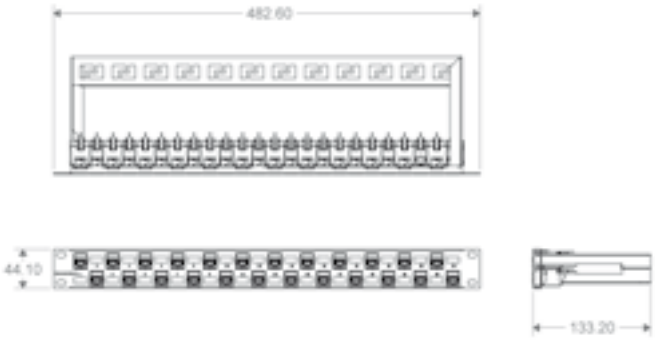
- Nominal Cable Diameter:-Stranded:- 5.8mm
- Length Tolerance :- (bracketed length) ± 1%

Environmental conditions

- Operating temperature from 0ºC to 50ºC at 93% relative humidity, non condensing
- Storage temperature from -20ºC to 70ºC

Brand-Rex Copper Connectivity - 10GPlus

Augmented Category 6 Modular Panel



Compatible 10GPlus System Products

	Catalogue Number	Colour	Qty per Pack
Augmented Category 6 Unshielded Jack	AC6JAKUOK2	Black	12
Augmented Category 6 Unshielded Jack	AC6JAKUOK3	White	12
Augmented Category 6 Shielded Jack	AC6JAKFOK2	Metallic	12

Product Part Numbering

	Catalogue Number	Colour	Qty per Pack
10GPlus 24 Port Modular Snap-in-jack Panel	MMCPNLX24SIJ2M-B	Black	1
10GPlus 24 Port Modular Snap-in-jack Panel	MMCPNLX24SIJ8M-B	Grey	1

PRODUCT DESCRIPTION

The Brand-Rex Augmented Category 6 Snap-In-Jack panel is part of the Brand-Rex 10GPlus cabling system. The 10GPlus cabling system is comprised of high performance cables and connectivity which not only provide a reliable platform for all of today's network applications, but are also designed to future proof networks for the emerging, new, higher speed protocols of tomorrow, such as 10GBASE-T. The 10GPlus system is classified as an Augmented Category 6 and Class EA product set that is fully backwards compatible to Category 6 (Class E) and Category 5e (Class D) products.

Packaging

- Panel and cable manager pre-assembled and individually packaged in a cardboard box

Applications

- Equipment racks
- Cabinets
- Wall mounted brackets

Installation

- Suitable for Brand-Rex approved LSA and 110 unshielded jacks
- Suitable for Brand-Rex approved LSA shielded jacks
- Keystone style connection interface

Mechanical Specifications

Dimensions

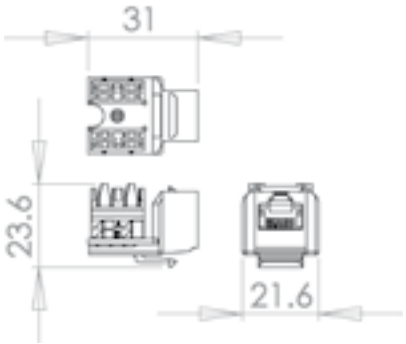
- 483.0mm × 44.5mm (1U) × 133.2mm (w×h×d)

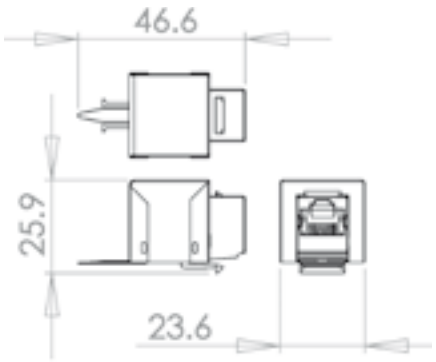
Material Data

- Panel and cable manager manufactured from high quality 1.5mm powder coated steel

Brand-Rex Copper Connectivity - 10GPlus Jacks

Augmented Category 6 Snap-In-Jacks





PRODUCT DESCRIPTION:

The Brand-Rex 10GPlus Snap-In-Jack offers true Class EA component performance using a patented contact array design. The 10GPlus system is classified as an Augmented Category 6 and Class EA product set that is fully backwards compatible to Category 6 (Class E) and Category 5e (Class D) products. The jack is also fully compatible with all our UK and Continental style faceplates and products.

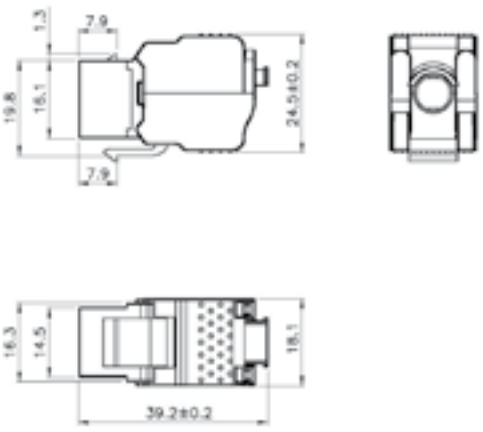
PRODUCT CHARACTERISTICS:

Outlet Style:	Unshielded and shielded Keystone type with RJ-45 ports
Cable Entry:	Top and Rear
Hole Plate Thickness:	Jack will clip into sheet material with a thickness of 1.6mm max.
Body Material:	High impact PBT UL94 - VO
Jack Contacts:	Phosphor Bronze
Plating:	50 µm gold over 100 µm of nickel
Punch Down Blocks:	LSA style IDC
IDC Contacts:	Phosphor Bronze
Wiring Standard:	EIA/TIA 568A/B
Conformance:	Category 6 ANSI/EIA/TIA 568B.2.1 : 2002 ISO/IEC 11801 : 2002 EN50173-1 : 2002

Product Part Numbering

	Catalogue Number	Colour	Qty per Pack
10GPlus Unshielded Snap-in-jack	AC6JAKUOK2	Black	12
10GPlus Unshielded Snap-in-jack	AC6JAKUOK3	White	12
10GPlus Shielded Snap-in-jack	AC6JAKFOK2	Metallic	12

Brand-Rex Copper Connectivity - 10GPlus Jacks
Augmented Category 6 Keystone Jack



Product Part Numbering

Description	Product Part Number
Augmented Category 6 Shielded Jack	AC6JAKS000CR

Compatible System Products

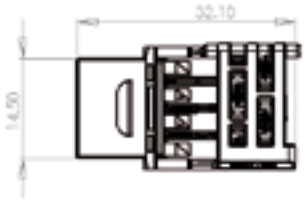
Description	Product Part Number
24 Port In-Line Snap-in-Jack Panel	MMCPNLX24SIJ2MIL
24 Port Staggered Snap-in-Jack Panel	MMCPNLX24SIJ2
24 Port Angled Snap-in-Jack Panel	MMCPNLX24SIJ2MAN
24 Port Coloured Insert Snap-in-Jack Panel - Black	MMCPNLX24SIJ2CII
24 Port Coloured Insert Snap-in-Jack Panel - Grey	MMCPNLX24SIJ8CII

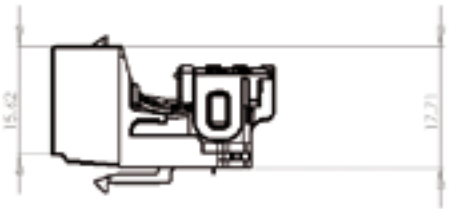
PRODUCT DESCRIPTION:
The 10GPlus Snap-In-Jack offers 500MHz component performance and quick tool-free wire termination with push down wire manager. The metal housing of the Keystone Jack is designed to provide a superior electromagnetic shielding performance. The jack is fully compatible with all our UK and continental style faceplates and products. Jacks are supplied with installation instructions.

PRODUCT CHARACTERISTICS:

Outlet Style:	Shielded Keystone type with Unkeyed RJ-45 ports
Cable Entry:	Rear
Hole Plate Thickness:	1.6mm Max
Body Material:	Shield – Bronze, nickel-plated Housing – ABS/PC, UL94-V2 rated Body – Zinc Die-casting nickel-plated
Jack Contacts:	Phosphor Bronze
Plating:	50 µm of gold over 40 µm of nickel
Punch Down Blocks:	Tool-free with push down cable manager for wire AWG 22-27 solid and stranded
Wire Terminations:	Tool-free with CAP
IDC Contacts:	Phosphor Bronze with 50 µm of plated tin
Wiring Standard:	EIA/TIA 568A & EIA/TIA 568B
Conformance:	Compliant with all the current draft ClassEA channel standards, compliant with Class E and D - can support ClassEA performance levels in a channel configuration

Brand-Rex Copper Connectivity - 10GPlus Jacks
Augmented Category 6 Tool-free Jack





PRODUCT DESCRIPTION:
When used within a channel the tool-free jack provides an industry leading electrical performance and is fully compatible with Brand-Rex UK and continental UNI style faceplates and products. The jacks come supplied in boxes of 12; termination instructions are on the rear of the box. No termination tool is required. Each jack has integral colour code wiring labels.

PRODUCT CHARACTERISTICS:

Outlet Style:	Unshielded with un-keyed RJ-45 port
Cable Entry:	Rear, top and bottom
Colour:	Black translucent
Body Materials:	Polycarbonate UL94 – V0
Jack Contacts:	Phosphor bronze, Plating 50 µm gold over 100 µm of nickel
Termination Block Material:	PBT UL94-V0
IDC Contacts:	Titanium copper, tin plated
Wiring Standard:	EIA/TIA 568B
Conformance:	Backwards compatible to the Cat6A standards: ISO/IEC 11801 : 2002, ANSI/EIA/TIA 568B.2-1.2002

Compliant with the new draft Cat6A standards:
ISO/IEC 11801 amendments 1.1 & 1.2
ANSI/EIA/TIA 568B.2-10

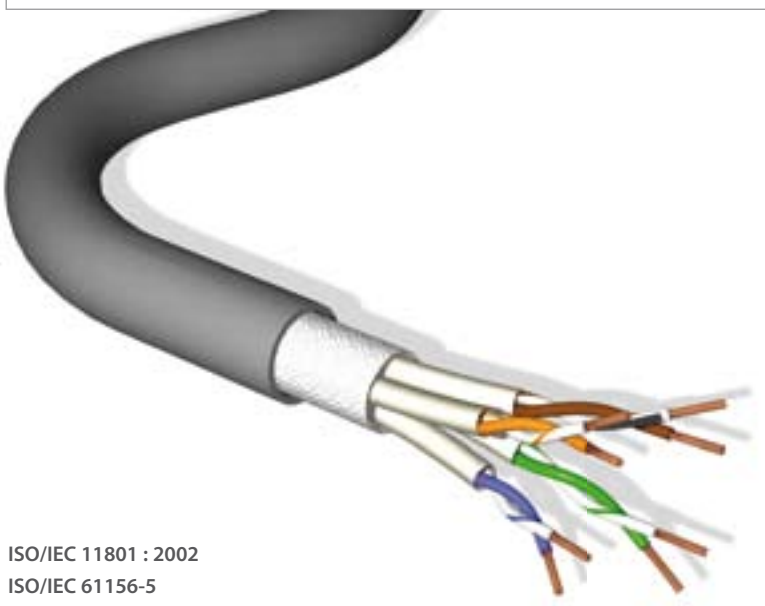
Product Part Numbering

Description	Product Part Number
10G Tool-free Jack	AC6JAKU002

BRAND-REX CATEGORY 7 CABLING (CATEGORY 7 - CLASS F):

Key Features

- U-MediaPlus is a range of universal media cables that exceed the Category 7 requirements of ISO/IEC 11801 : 2002 and EN 50173-1 : 2002
- Third party independent certificates of compliance (from 3P) are available
- Provides a foundation for supporting high bandwidth applications
- Multi Gigabit capability
- Individual and overall shielding providing outstanding EMI/RFI protection
- Backward compatibility guaranteed



ISO/IEC 11801 : 2002
ISO/IEC 61156-5
EN 50173-1 : 2002
EN 50288-4-1

Brand-Rex Copper Cables - U-MediaPlus

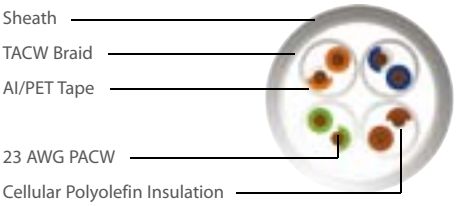
Communication Cable, PIMF cable, S/FTP, 100 Ω, 4x2xAWG 23/1

Electrical Characteristics @ 20°c	Specification	Typical Performance
Conductor Loop Resistance	Max 19 0hm / 100m	14 Ω / 100m
Conductor Resistance Unbalance	Max 2%	0.5%
Dielectric Strength	1.0kV dc or 0.7kV ac for 1 min	100% in process test
Insulation Resistance	>500MΩ.km @ 100-500 V test voltage	>5 GΩ.km
Capacitance Unbalance to Earth	Max 160 pF/100m	80 pF/100m
Velocity of Propagation	<537.6 nsec/100m @ 100MHz	445 nsec/100m @ 100MHz (NVP for hand held testers = 0.74)
Skew	Max 25 nsec/100m @ 100MHz	5 nsec/100m @ 100MHz
Mean Characteristic Impendance	100 Ω +/- 5 Ω @ 100MHz	100 Ω +/- 3 Ω @ 100MHz
Transfer Impendance	Max 10 mΩ/m @ 100 MHz	5 mΩ/m @ 100MHz (ISO 61156 grade 1 cable)
Coupling Attenuation up to 1Ghz	Min 80 db	90 db

Frequency (MHz)		1	4	10	16	20	31.25	62.5	100	155	200	250	300	600	750	900	1000
Insertion Loss (dB / 100m)	Spec	2.0	2.0	5.7	7.2	8.1	10.1	14.5	18.5	23.4	26.8	30.2	33.3	48.9	na	na	na
	Typical	1.9	1.9	5.5	7.0	7.8	9.9	14.1	18.0	22.7	26.1	29.4	32.5	47.6	54.1	60.0	63.8
NEXT (dB)	Spec	80.0	80.0	80.0	80.0	80.0	80.0	75.5	72.4	69.6	67.9	66.5	65.3	60.8	na	na	na
	Typical	100.0	100.0	100.0	100.0	100.0	100.0	98.0	94.3	90.9	88.9	87.1	85.7	80.3	78.5	77.1	76.3
PSNEXT (dB)	Spec	77.0	77.0	77.0	77.0	77.0	77.0	72.8	69.4	66.6	64.9	63.5	62.3	57.8	na	na	na
	Typical	97.0	97.0	97.0	97.0	97.0	97.0	95.0	91.3	87.9	85.9	84.1	82.7	77.3	75.5	74.1	73.3
ELFEXT (dB / 100m)	Spec	80.0	80.0	74.0	69.9	68.0	64.1	58.1	54.0	50.2	48.0	46.0	44.5	38.4	na	na	na
	Typical	90.0	90.0	90.0	86.7	84.8	80.9	74.9	70.8	67.0	64.8	62.8	61.3	55.2	53.3	51.7	50.8
PSELFEXT (dB / 100m)	Spec	77.0	77.0	71.0	66.9	65.0	61.1	55.1	51.0	47.2	45.0	43.0	41.5	35.4	na	na	na
	Typical	87.0	87.0	87.0	83.7	81.8	77.9	71.9	67.8	64.0	61.8	59.8	58.3	52.2	50.3	48.7	47.8
Return Loss (dB / 100m)	Spec	NA	NA	25.0	25.0	25.0	23.6	21.5	20.1	18.8	18.0	17.3	17.3	17.3	na	na	na
	Typical	27.0	27.0	30.0	30.0	30.0	28.6	26.5	25.1	23.8	23.0	22.3	21.8	19.7	19.0	18.4	18.1
ACR (dB / 100m)	Typical	98.1	98.1	94.5	93.0	92.2	90.1	83.9	76.3	68.1	62.8	57.7	53.3	32.6	24.5	17.1	12.5
PSACR (dB / 100m)	Typical	95.1	95.1	91.5	90.0	89.2	87.1	80.9	73.3	65.1	59.8	54.7	50.3	29.6	21.5	14.1	9.5

Product Part Numbering

Part Number	UM10	UM10-D	UM10-HF1	UM10-HF1-D	UM10-HF3	UM10-HF3-D
Outer Sheath	PVC	PVC	LSZH	LSZH	LSZH	LSZH
Construction	Simplex	Duplex	Simplex	Duplex	Simplex	Duplex
Cable Weight	62.6 kg/km	122.0 kg/km	64.1kg/km	127.1 kg/km	65.1 kg/km	129.0 kg/km
Calorific Value	0.22 k Wh/m	0.42 k Wh/m	0.19 k Wh/m	0.39 k Wh/m	0.20 k Wh/m	0.43 k Wh/m
Outer Diameter (nom)	7.5mm	15 x 7.5mm	7.5mm	15 x 7.5mm	7.8mm	15.6 x 7.8mm
Sheath Colour	Grey RAL 7037	Grey RAL 7037	Violet RAL 4005	Violet RAL 4005	Blue RAL 5015	Blue RAL 5015
Fire Safety Rating	IEC 60332-1-2	IEC 60332-1-2	IEC 60332-1-2	IEC 60332-1-2	IEC 60332-3-24	IEC 60332-3-24
Acid Gas Emissions	na	na	IEC 60754-1	IEC 60754-1	IEC 60754-1	IEC 60754-1
Smoke Index	na	na	IEC 61034	IEC 61034	IEC 61034	IEC 61034
Packaging	WRL	WRL	WRL	WRL	WRL	WRL



Independent 3rd Party Certification (3P)

PRODUCT DESCRIPTION:

U-MediaPlus S/FTP, 100 Ω, 4x2xAWG 23/1 premium grade Class F/Cat 7 cables to support Gigabit Ethernet protocol for installation in horizontal and backbone areas.

PRODUCT PERFORMANCE:

Core

Conductor:	23 AWG Plain Annealed Copper Wire
Insulation:	Cellular Polyolefin
Diameter:	1.45mm Nominal
Pair:	2 of the above cores
Tape Screen:	Individual pair wrapped with aluminium polyester tape, applied metal side out (Pair in Metal Foil)
Pair Colour:	Blue-White, Orange-White, Green-White, Brown-White

Final Assembly

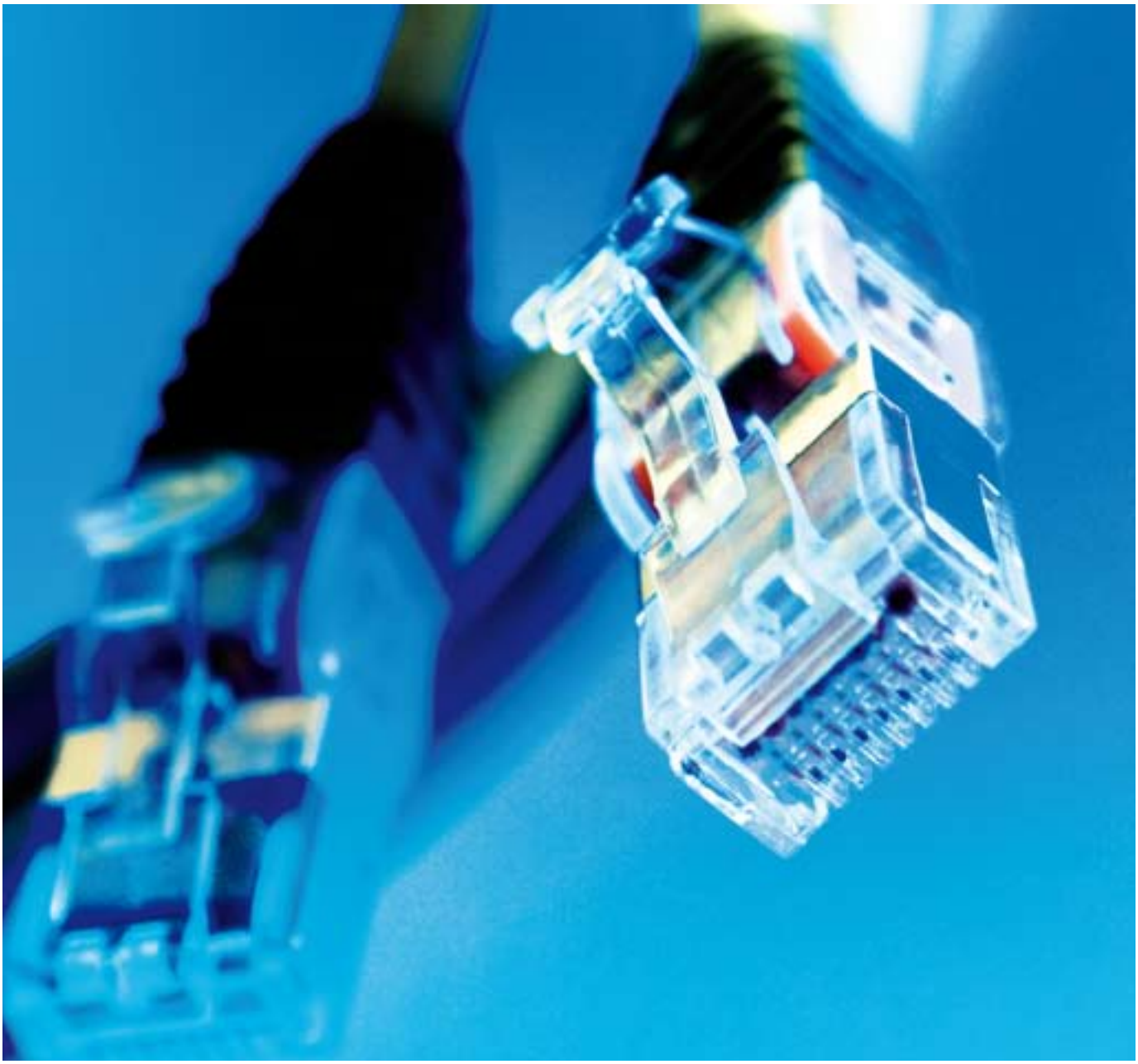
Cable:	4 of the above screened pairs
Braid Screen:	0.127mm Tinned Annealed Copper Wire
Sheath:	PVC or LSZH compound

Mechanical and Environmental

Temp - Installation:	0°c to +50°c
Temp - Operation:	20°c to +75°c
Max Tensile Load:	10kg per simplex cable (installation)
Min Bend Radius:	8 x Outer Diameter (installation) 4 x Outer Diameter (operation)

Packaging

WRL	500m Wooden Reel 1000m Wooden Reel



BRAND-REX CAT6PLUS SYSTEM (CATEGORY 6 - CLASS E):

Key Features

- Cat6Plus is standards compliant
- Cat6Plus is third party independently verified by 3P and GHMT
- Third party independent certificates of compliance are available for component and channel performance from 3P Inc. and GHMT Laboratories GmbH
- 1000BASE-T will operate with a lower bit error rate given the extra margin afforded by Cat6Plus
- Cat6Plus shielded systems will support 10GBASE-T in any channel configuration up to 100 metres*. Cat6Plus unscreened systems can support 10GBASE-T in any channel configuration up to 37 metres* and up to 55 metres* subject to Alien Cross Talk verification

  * Subject to testing to the latest versions of TSB 155 or TR 24750
- Cat6Plus supports broadband video applications up to 550MHz
- Cat6Plus supports Power over Ethernet applications including:
  - VoIP
  - WLAN access points
  - Security cameras etc
- Reduced bit error rate as a consequence of higher system margin above standard
- System available in both shielded and unshielded options
- Cat6Plus is interoperable and backwards compatible
- For EMC add the same statement as outlined for Cat 5e

The Cat6Plus System

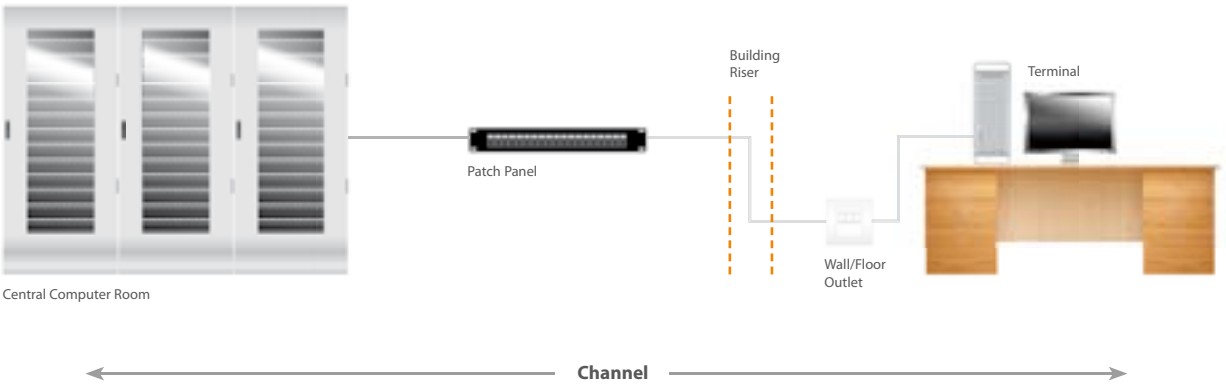
Structured wiring systems comprising of Cat6Plus cables, patch leads and connectivity are designed to be compliant with the current sets of Class E / Category 6 published and draft standards requirements as an absolute minimum.

The systems support all protocols defined in current editions, and amendments, of ISO 11801:2002, ANSI/TIA/EIA 568B.2.1 : 2002 and EN50173-1:2002 (including IEEE802.3ab Gigabit Ethernet) and are fully backward compatible.

Cat6Plus is a premium grade cabling system that is characterised to 550MHz and its performance significantly exceeds the requirements specified in the current versions of the published and draft standards for Class E / Category 6.

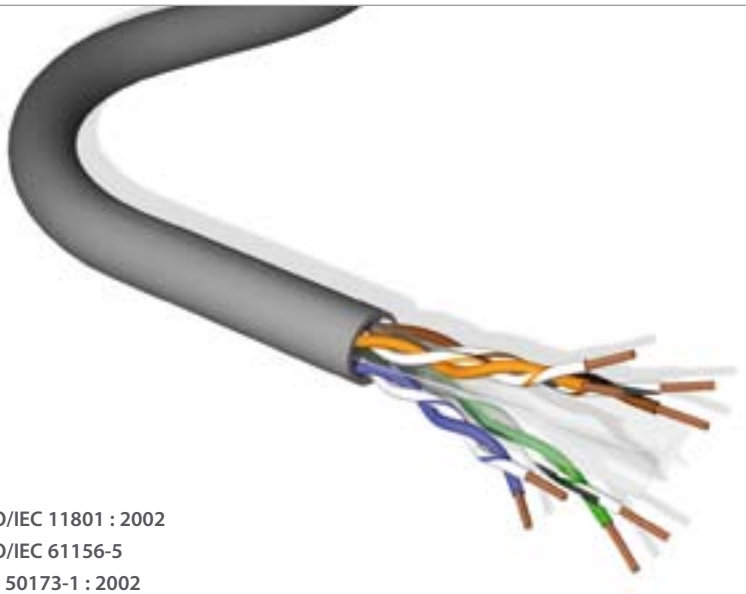
Brand-Rex Copper Cables - Cat6Plus Channel Performance

Unshielded and Shielded systems



4 Connector Channel Performance

Frequency (MHz)		1	4	10	16	20	31.25	62.5	100	125	155	175	200	250	350	500	550
Attenuation (dB)	Typical	1.9	3.5	5.5	7.0	7.8	9.8	14.2	18.4	20.8	23.4	25.0	27.0	30.6	37.2	45.9	48.6
	Spec	2.1	4.0	6.3	8.0	9.0	11.4	16.5	21.3	24.1	27.2	29.2	31.5	35.9			
NEXT (dB)	Typical	80.7	71.0	64.6	61.2	59.6	56.4	51.4	47.9	46.3	44.7	43.8	42.8	41.1	35.6	32.9	32.2
	Spec	65.0	63.0	56.6	53.2	51.6	48.4	43.4	39.9	38.3	36.7	35.8	34.8	33.1			
PSNEXT (dB)	Typical	78.6	68.8	62.3	58.9	57.2	54.0	48.8	45.3	43.6	42.0	41.1	40.1	38.3	32.8	30.0	29.3
	Spec	62.0	60.5	54.0	50.6	49.0	45.7	40.6	37.1	35.4	33.8	32.9	31.9	30.2			
Return Loss (dB)	Typical	28.0	25.0	23.0	22.0	21.5	20.5	19.0	18.0	17.5	17.0	16.8	16.5	16.0	15.3	14.5	14.3
	Spec	19.0	19.0	19.0	18.0	17.5	16.5	14.0	12.0	11.0	10.1	9.6	9.0	8.0			
ELFEXT (dB)	Typical	78.3	66.2	58.3	54.2	52.2	48.4	42.3	38.3	36.3	34.5	33.4	32.2	30.3	22.4	19.3	18.4
	Spec	63.3	51.2	43.3	39.2	37.2	33.4	27.3	23.3	21.3	19.5	18.4	17.2	15.3			
PSELFEXT (dB)	Typical	75.3	63.2	55.3	51.2	49.2	45.4	39.3	35.3	33.3	31.5	30.4	29.2	27.3	19.4	16.3	15.4
	Spec	60.3	48.2	40.3	36.2	34.2	30.4	24.3	20.3	18.3	16.5	15.4	14.2	12.3			
Propagation Delay (ns)	Typical	520	505	500	500	500	500	500	500	500	500	500	500	500	500	500	500
	Spec	580	562	555	553	552	550	549	548	547	547	547	547	546			
Delay Skew (ns)	Typical	<30	<30	<30	<30	<30	<30	<30	<30	<30	<30	<30	<30	<30	<30	<30	<30
	Spec	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50			
ACR (dB)	Typical	78.8	67.6	59.1	54.3	51.8	46.6	37.2	29.6	25.5	21.3	18.7	15.8	10.5	-1.6	-13.1	-16.5
	Spec	62.9	59.0	50.2	45.2	42.6	37.0	26.9	18.6	14.2	9.51	6.6	3.3	-2.8			
PSACR (dB)	Typical	76.7	65.3	56.8	51.9	49.4	44.1	34.6	26.9	22.9	8.6	16.0	13.1	7.7	-4.5	-15.9	-19.4
	Spec	59.9	56.5	47.7	42.6	39.9	34.3	24.1	15.8	11.3	6.6	3.7	0.3	-5.8			



ISO/IEC 11801 : 2002
ISO/IEC 61156-5
EN 50173-1 : 2002
EN 50288-6-1
ANSI/TIA/EIA 568B.2.1 : 2002

Brand-Rex Copper Cables - Cat6Plus

Communication Cable, U/UTP, 100 Ω, 4x2xAWG 23/1

Electrical Characteristics @ 20°c	Specification	Typical Performance
Conductor Loop Resistance	Max 19 Ω / 100m	14 Ω / 100m
Conductor Resistance Unbalance	Max 2%	0.5%
Dielectric Strength	1.0kV dc or 0.7kV ac for 1 min	100% in process test
Insulation Resistance	>500MΩ.km @ 100-500 V test voltage	>5 GΩ.km
Capacitance Unbalance to Earth	Max 160 pF/100m	40 pF/100m
Velocity of Propagation	<534 nsec/100m @ 100MHz	490 nsec/100m @ 100MHz (NVP for hand held testers = 0.69)
Skew	Max 40 nsec/100m @ 100MHz	30 nsec/100m @ 100MHz
Mean Characteristic Impendance	100 Ω +/- 5 Ω @ 100MHz	100 Ω +/- 3Ω @ 100MHz
Coupling Attenuation up to 1Ghz	Min 40 dB	56 dB

Frequency (MHz)		1	4	10	16	20	31.25	62.5	100	155	200	250	300	550
Insertion Loss (dB / 100m)	Spec	2.1	3.8	6.0	7.6	8.5	10.7	15.5	19.9	25.3	29.1	33.0	na	na
	Typical	1.9	3.5	5.5	7.0	7.8	9.9	14.1	18.0	22.7	26.1	29.4	32.5	45.4
NEXT (dB)	Spec	66.0	65.3	59.3	56.2	54.8	51.9	47.4	44.3	41.4	39.8	38.3	na	na
	Typical	86.5	77.5	71.5	68.4	67.0	64.1	59.6	56.5	53.6	52.0	50.5	49.3	45.4
PSNEXT (dB)	Spec	64.0	63.3	57.3	54.2	52.8	49.9	45.4	42.3	39.4	37.8	36.3	na	na
	Typical	84.5	75.5	69.5	66.4	65.0	62.1	57.6	54.5	51.6	50.0	48.5	47.3	43.4
ELFEXT (dB / 100m)	Spec	66.0	58.0	50.0	45.9	44.0	40.1	34.1	30.0	26.2	24.0	22.0	na	na
	Typical	85.0	73.0	65.0	60.9	59.0	55.1	49.1	45.0	41.2	39.0	37.0	35.5	30.2
PSELFEXT (dB / 100m)	Spec	64.0	55.0	47.0	42.9	41.0	37.1	31.1	27.0	23.2	21.0	19.0	na	na
	Typical	82.0	70.0	62.0	57.9	56.0	52.1	46.4	42.0	38.2	36.0	34.0	32.5	27.2
Return Loss (dB / 100m)	Spec	na	23.0	25.0	25.0	25.0	23.6	21.5	20.1	18.8	18.0	17.3	na	na
	Typical	27.0	30.0	30.0	30.0	30.0	28.6	26.5	25.1	23.8	23.0	22.3	21.8	19.9
ACR (dB / 100m)	Typical	84.6	73.9	66.0	61.4	59.1	54.2	45.5	38.5	30.9	25.9	21.1	16.9	0.0
PSACR (dB / 100m)	Typical	82.6	71.9	64.0	59.4	57.1	52.2	43.5	36.5	28.9	23.9	19.1	14.9	-2.0

Product Part Numbering

Part Number	C6U	C6U-D	C6U-HF1	C6U-HF1-D	C6U-HF3	C6U-HF3-D
Outer Sheath	PVC	PVC	LSZH	LSZH	LSZH	LSZH
Construction	Simplex	Duplex	Simplex	Duplex	Simplex	Duplex
Cable Weight	43.5 kg/km	87.0 kg/km	43.0kg/km	86.0 kg/km	56.5 kg/km	113 kg/km
Calorific Value	0.19 k Wh/m	0.38 k Wh/m	0.18 k Wh/m	0.36 k Wh/m	0.26 k Wh/m	0.52 k Wh/m
Outer Diameter (nom)	6.2mm	12.5 x 6.2mm	6.2mm	12.5 x 6.2mm	7.0mm	14.1 x 7.0mm
Sheath Colour	Grey RAL 7037	Grey RAL 7037	Violet RAL 4005	Violet RAL 4005	Blue RAL 5015	Blue RAL 5015
Fire Safety Rating	IEC 60332-1-2	IEC 60332-1-2	IEC 60332-1-2	IEC 60332-1-2	IEC 60332-3-24	IEC 60332-3-24
Acid Gas Emissions	na	na	IEC 60754-1	IEC 60754-1	IEC 60754-1	IEC 60754-1
Smoke Index	na	na	IEC 61034	IEC 61034	IEC 61034	IEC 61034
Packaging	RLX / WRL	WRL	RLX / WRL	WRL	WRL	WRL

Independent 3rd Party Certification (3P)

PRODUCT DESCRIPTION:
Cat6Plus U/UTP, 100 Ω, 4x2xAWG 23/1 premium grade Class E/Cat 6 cable to support Gigabit Ethernet protocol for installation in horizontal and backbone areas.

PRODUCT PERFORMANCE:

Core

Conductor:	23 AWG Plain Annealed Copper Wire
Insulation:	Polyolefin
Diameter:	1.00mm Nominal
Pair:	2 of the above cores
Pair Colour:	Blue-White, Orange-White, Green-White, Brown-White

Final Assembly

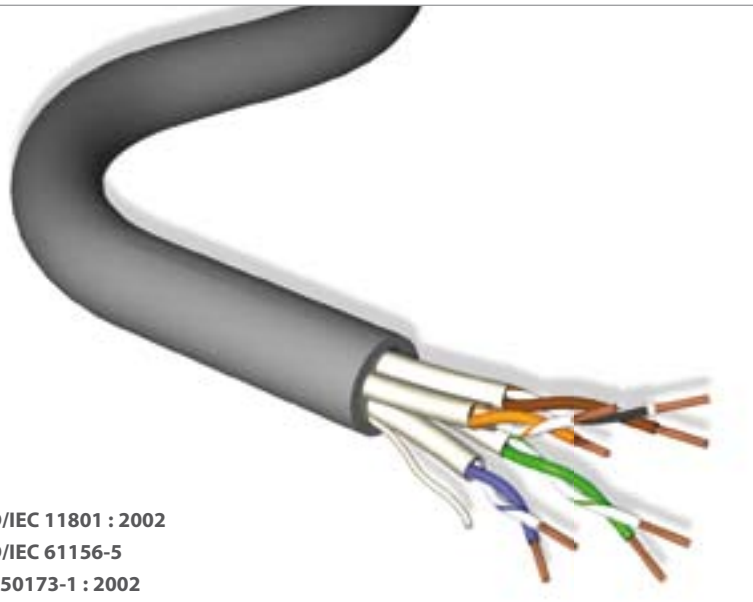
Cable:	4 of the above pairs cabled together around a cross filler
Sheath:	PVC or LSZH compound

Mechanical and Environmental

Temp - Installation:	0°c to +50°c
Temp - Operation:	-20°c to +75°c
Max Tensile Load:	10kg per simplex cable (installation)
Min Bend Radius:	8 x Outer Diameter (installation) 4 x Outer Diameter (operation)

Packaging

RLX	305m Reelex Box
WRL	500m Wooden Reel 1000m Wooden Reel



ISO/IEC 11801 : 2002
ISO/IEC 61156-5
EN 50173-1 : 2002
EN 50288-5-1
ANSI/TIA/EIA 568B.2.1 : 2002

Brand-Rex Copper Cables - Cat6Plus

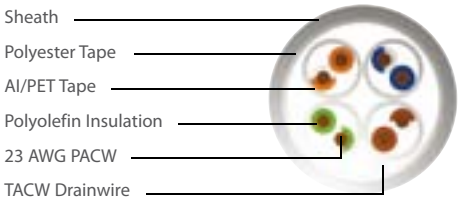
Communication Cable, U/FTP, 100 Ω, 4x2xAWG 23/1

Electrical Characteristics @ 20°c	Specification	Typical Performance
Conductor Loop Resistance	Max 19 Ohm / 100m	14 Ohm / 100m
Conductor Resistance Unbalance	Max 2%	0.5%
Dielectric Strength	1.0kV dc or 0.7kV ac for 1 min	100% in process test
Insulation Resistance	>500MOhm @ 100-500 V test voltage	>5 GOhm.km
Capacitance Unbalance to Earth	Max 160 pF/100m	40 pF/100m
Velocity of Propagation	<537.6 nsec/100m @ 100MHz	440 nsec/100m @ 100MHz (NVP for hand held testers = 0.74)
Skew	Max 40 nsec/100m @ 100MHz	20 nsec/100m @ 100MHz
Mean Characteristic Impendance	100 Ohm +/- 5 Ohm @ 100MHz	100 Ω +/- 3 Ohm @ 100MHz
Transfer Impendance	Max 100 mΩ/m @ 10 MHz	30 mΩ/m @ 10MHz (ISO 61156 grade 2)

Frequency (MHz)		1	4	10	16	20	31.25	62.5	100	155	200	250	300	600
Insertion Loss (dB / 100m)	Spec	2.1	3.8	6.0	7.6	8.5	10.7	15.5	19.9	25.3	29.1	33.0	na	na
	Typical	1.9	3.5	5.5	7.0	7.8	9.9	14.1	18.0	22.7	26.1	29.4	32.5	47.6
NEXT (dB)	Spec	66.0	65.3	59.3	56.2	54.8	51.9	47.4	44.3	41.4	39.8	38.3	na	na
	Typical	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	95.0	90.0	90.0
PSNEXT (dB)	Spec	64.0	63.3	57.3	54.2	52.8	49.9	45.4	42.3	39.4	37.8	36.3	na	na
	Typical	97.0	97.0	97.0	97.0	97.0	97.0	97.0	97.0	97.0	97.0	92.0	87.0	87.0
ELFEXT (dB / 100m)	Spec	66.0	58.0	50.0	45.9	44.0	40.1	34.1	30.0	26.2	24.0	22.0	na	na
	Typical	90.0	89.0	85.0	81.0	76.0	72.0	67.0	60.0	52.0	50.0	49.0	40.0	35.0
PSELFEXT (dB / 100m)	Spec	64.0	55.0	47.0	42.9	41.0	37.1	31.1	27.0	23.2	21.0	19.0	na	na
	Typical	87.0	86.0	82.0	78.0	73.0	69.0	64.0	57.0	49.0	47.0	46.0	37.0	32.0
Return Loss (dB / 100m)	Spec	20.0	23.0	25.0	25.0	25.0	23.6	21.5	20.1	18.8	18.0	17.3	na	na
	Typical	30.0	30.0	30.0	30.0	30.0	27.0	25.0	24.0	22.0	21.0	20.0	19.0	17.0
ACR (dB / 100m)	Typical	98.1	96.5	94.5	93.0	92.2	90.1	85.9	82.0	77.3	73.9	65.9	57.5	42.4
PSACR (dB / 100m)	Typical	95.1	93.5	91.5	90.0	89.2	87.1	82.9	79.0	74.3	70.9	62.6	54.5	39.4

Product Part Numbering

Part Number	C6U/FTP	C6U/FTP-D	C6U/FTP-HF1	C6U/FTP-HF1-D
Outer Sheath	PVC	PVC	LSZH	LSZH
Construction	Simplex	Duplex	Simplex	Duplex
Cable Weight (nom)	51.1 kg/km	102.5 kg/km	53.8 kg/km	108.0 kg/km
Calorific Value	0.22 k Wh/m	0.22 k Wh/m	0.20 k Wh/m	0.20 k Wh/m
Outer Diameter (nom)	7.15mm	7.15mm	7.15mm	7.15mm
Sheath Colour	Grey RAL 7037	Grey RAL 7037	Violet RAL 4005	Violet RAL 4005
Fire Safety Rating	IEC 60332-1-2	IEC 60332-1-2	IEC 60332-1-2	IEC 60332-1-2
Acid Gas Emissions	na	na	IEC 60754-1	IEC 60754-1
Smoke Index	na	na	IEC 61034	IEC 61034
Packaging	WRL	WRL	WRL	WRL



PRODUCT DESCRIPTION:
Cat6Plus U/FTP, 100 Ω, 4x2xAWG 23/1 premium grade Class E/Cat 6 cable to support Gigabit Ethernet protocol for installation in horizontal and backbone areas.

PRODUCT PERFORMANCE:

Core

Conductor:	23 AWG Plain Annealed Copper Wire
Insulation:	Polyolefin
Diameter:	1.4mm Nominal
Pair:	2 of the above cores
Tape Screen:	Individual pair wrapped with aluminium polyester tape applied metal side out
Pair Colour:	Blue-White, Orange-White Green-White, Brown-White

Final Assembly

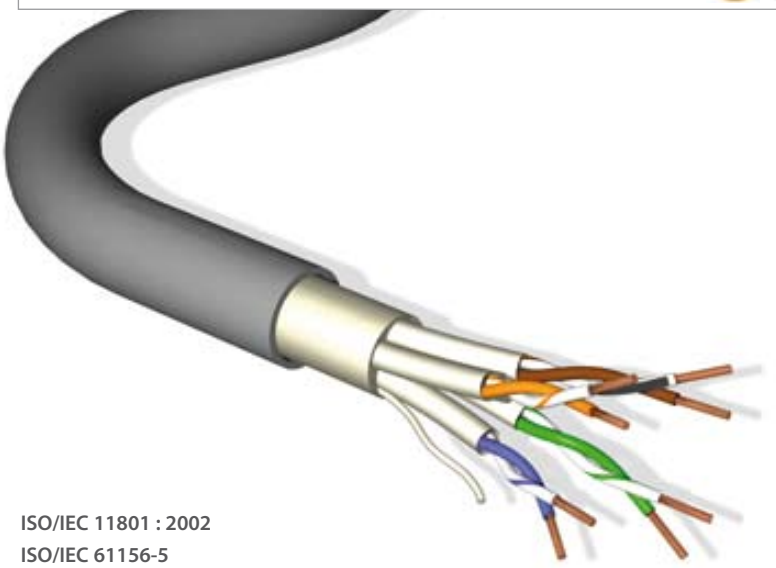
Cable:	4 of the above pairs cabled together around a cross filler
Drainwire:	0.5mm Tinned Annealed Copper Wire
Tape Screen:	Wrapped with polyester tape
Sheath:	PVC or LSZH compound

Mechanical and Environmental

Temp - Installation:	0°c to +50°c
Temp - Operation:	-20°c to +75°c
Max Tensile Load:	10kg per simplex cable (installation)
Min Bend Radius:	8 x Outer Diameter (installation) 4 x Outer Diameter (operation)

Packaging

WRL	500m Wooden Reel 1000m Wooden Reel



ISO/IEC 11801 : 2002
ISO/IEC 61156-5
EN 50173-1 : 2002
EN 50288-5-1
ANSI/TIA/EIA 568B.2.1 : 2002

Brand-Rex Copper Cables - Cat6Plus

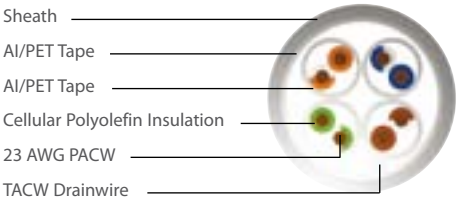
Communication Cable, F/FTP, 100 Ω, 4x2xAWG 23/1

Electrical Characteristics @ 20°c	Specification	Typical Performance
Conductor Loop Resistance	Max 19 Ω / 100m	14 Ω / 100m
Conductor Resistance Unbalance	Max 2%	0.5%
Dielectric Strength	1.0kV dc or 0.7kV ac for 1 min	100% in process test
Insulation Resistance	>500MΩ @ 100-500 V test voltage	>500 MΩ.km
Capacitance Unbalance to Earth	Max 160 pF/100m	80 pF/100m
Velocity of Propagation	<537.6 nsec/100m @ 100MHz	537.6 nsec/100m @ 100MHz (NVP for hand held testers = 0.74)
Skew	Max 40 nsec/100m @ 100MHz	25 nsec/100m @ 100MHz
Mean Characteristic Impendance	100 Ω +/- 5 Ω @ 100MHz	100 Ω +/- 3 Ω @ 100MHz
Transfer Impendance	Max 100 mΩ/m @ 10MHz	30 mΩ/m @ 10MHz (ISO 61156 grade 1 cable)
Coupling Attenuation up to 1Ghz	Min 55 dB	75 dB

Frequency (MHz)		1	4	10	16	20	31.25	62.5	100	155	200	250	300	600
Insertion Loss (dB / 100m)	Spec	2.1	3.8	6.0	7.6	8.5	10.7	15.5	19.9	25.3	29.1	33.0	na	na
	Typical	1.9	3.5	5.5	7.0	7.8	9.9	14.1	18.0	22.7	26.1	29.4	32.5	47.6
NEXT (dB)	Spec	66.0	65.3	59.3	56.2	54.8	51.9	47.4	44.3	41.4	39.8	38.3	na	na
	Typical	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	95.0	90.0	90.0
PSNEXT (dB)	Spec	64.0	63.3	57.3	54.2	52.8	49.9	45.4	42.3	39.4	37.8	36.3	na	na
	Typical	97.0	97.0	97.0	97.0	97.0	97.0	97.0	97.0	97.0	97.0	92.0	87.0	87.0
ELFEXT (dB / 100m)	Spec	66.0	58.0	50.0	45.9	44.0	40.1	34.1	30.0	26.2	24.0	22.0	na	na
	Typical	90.0	89.0	85.0	81.0	76.0	72.0	67.0	60.0	52.0	50.0	49.0	40.0	35.0
PSELFEXT (dB / 100m)	Spec	64.0	55.0	47.0	42.9	41.0	37.1	31.1	27.0	23.2	21.0	19.0	na	na
	Typical	88.0	86.0	82.0	78.0	73.0	69.0	64.0	57.0	49.0	47.0	46.0	37.0	32.0
Return Loss (dB / 100m)	Spec	23.0	23.0	25.0	25.0	25.0	23.6	21.5	20.1	18.8	18.0	17.3	na	na
	Typical	30.0	30.0	30.0	30.0	30.0	27.0	25.0	24.0	22.0	21.0	20.0	19.0	17.0
ACR (dB / 100m)	Typical	96.5	96.5	94.5	93.0	92.2	90.1	85.5	82.0	77.3	74.0	65.6	57.5	42.4
PSACR (dB / 100m)	Typical	93.5	93.5	91.5	90.0	89.2	87.1	82.9	79.0	74.3	71.0	62.6	54.5	39.4

Product Part Numbering

Part Number	C6F/FTP	C6F/FTP-HF1	C6F/FTP-HF3
Outer Sheath	PVC	LSZH	LSZH
Construction	Simplex	Simplex	Simplex
Cable Weight	51.4 kg/km	54.3 kg/km	55.3 kg/km
Calorific Value	0.23 k Wh/m	0.20 k Wh/m	0.21 k Wh/m
Outer Diameter (nom)	7.3mm	7.3mm	7.4mm
Sheath Colour	Grey RAL 7037	Violet RAL 4005	Blue RAL 5015
Fire Safety Rating	IEC 60332-1-2	IEC 60332-1-2	IEC 60332-3-24
Acid Gas Emissions	na	IEC 60754-1	IEC 60754-1
Smoke Index	na	IEC 61034	IEC 61034
Packaging	WRL	WRL	WRL



Independent 3rd Party Certification (3P)

PRODUCT DESCRIPTION:

Cat6Plus F/FTP, 100 Ω, 4x2xAWG 23/1 premium grade Class E/Cat 6 cable to support Gigabit Ethernet protocol for installation in horizontal and backbone areas.

PRODUCT PERFORMANCE:

Core

Conductor:	23 AWG Plain Annealed Copper Wire
Insulation:	Cellular Polyolefin
Diameter:	1.45mm Nominal
Pair:	2 of the above cores
Tape Screen:	Individual pair wrapped with aluminium polyester tape applied metal side out
Pair Colour:	Blue-White, Orange-White Green-White, Brown-White

Final Assembly

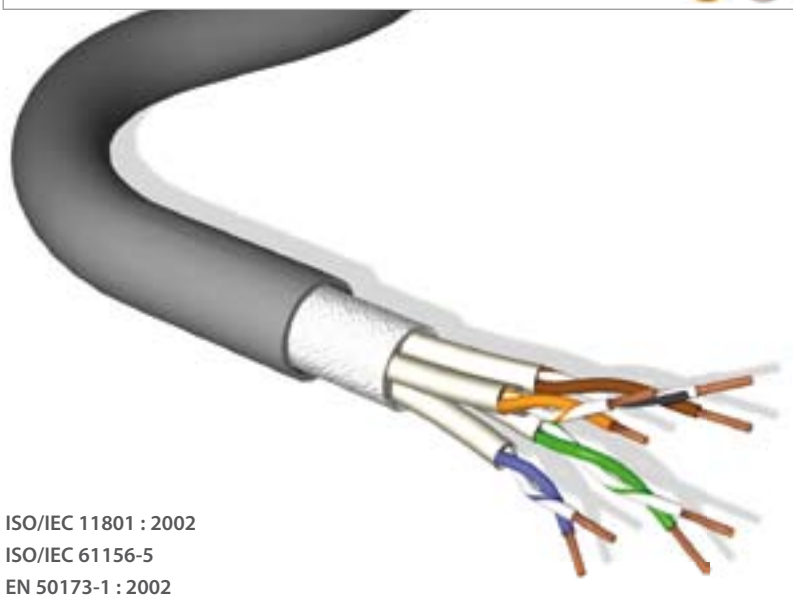
Cable:	4 of the above shielded pairs
Drainwire:	0.5mm Tinned Annealed Copper Wire
Tape Screen:	Wrapped with aluminium polyester tape, applied metal side in
Sheath:	PVC or LSZH compound

Mechanical and Environmental

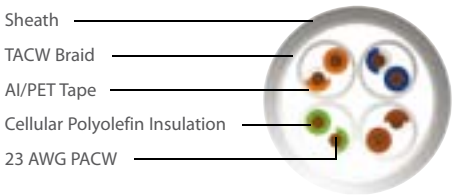
Temp - Installation:	0°c to +50°c
Temp - Operation:	-20°c to +75°c
Max Tensile Load:	10kg per simplex cable (installation)
Min Bend Radius:	8 x Outer Diameter (installation) 4 x Outer Diameter (operation)

Packaging

WRL	500m Wooden Reel 1000m Wooden Reel



ISO/IEC 11801 : 2002
ISO/IEC 61156-5
EN 50173-1 : 2002
EN 50288-5-1
ANSI/TIA/EIA 568B.2.1 : 2002



Brand-Rex Copper Cables - Cat6Plus

Communication Cable, S/FTP, 100 Ω, 4x2xAWG 23/1

Electrical Characteristics @ 20°c	Specification	Typical Performance
Conductor Loop Resistance	Max 19 Ω / 100m	14 Ω / 100m
Conductor Resistance Unbalance	Max 2%	0.5%
Dielectric Strength	1.0kV dc or 0.7kV ac for 1 min	100% in process test
Insulation Resistance	>500MΩ.km @ 100-500 V test voltage	>5 GΩ.km
Capacitance Unbalance to Earth	Max 160 pF/100m	80 pF/100m
Velocity of Propagation	<537.6 nsec/100m @ 100MHz	445 nsec/100m @ 100MHz (NVP for hand held testers = 0.74)
Skew	Max 40 nsec/100m @ 100MHz	5 nsec/100m @ 100MHz
Mean Characteristic Impendance	100 Ω +/- 5 Ω @ 100MHz	100 Ω +/- 3 0hm @ 100MHz
Transfer Impendance	Max 100 mΩ/m @ 10 MHz	5 mΩ/m @ 10MHz (ISO 61156 grade 1 cable)
Coupling Attenuation up to 1Ghz	Min 55 dB	90 dB

Frequency (MHz)		1	4	10	16	20	31.25	62.5	100	155	200	250	300	600
Insertion Loss (dB / 100m)	Spec	2.1	3.8	6.0	7.6	8.5	10.7	15.5	19.9	25.3	29.1	33.0	na	na
	Typical	1.9	3.5	5.5	7.0	7.8	9.9	14.1	18.0	22.7	26.1	29.4	32.5	47.6
NEXT (dB)	Spec	66.0	65.3	59.3	56.2	54.8	51.9	47.4	44.3	41.4	39.8	38.3	na	na
	Typical	100.0	100.0	100.0	100.0	100.0	100.0	98.0	94.3	90.9	88.9	87.1	85.7	80.3
PSNEXT (dB)	Spec	64.0	63.3	57.3	54.2	52.8	49.9	45.4	42.3	39.4	37.8	36.3	na	na
	Typical	97.0	97.0	97.0	97.0	97.0	97.0	95.0	91.3	87.9	85.9	84.1	82.7	77.3
ELFEXT (dB / 100m)	Spec	66.0	58.0	50.0	45.9	44.0	40.1	34.1	30.0	26.2	24.0	22.0	na6	na
	Typical	90.0	90.0	90.0	86.7	84.8	80.9	74.9	70.8	67.0	64.8	62.8	1.3	55.2
PSELFEXT (dB / 100m)	Spec	64.0	55.0	47.0	42.9	41.0	37.1	31.1	27.0	23.2	21.0	19.0	na	na
	Typical	87.0	87.0	87.0	83.7	81.8	77.9	71.9	67.8	64.0	61.8	59.8	58.3	52.2
Return Loss (dB / 100m)	Spec	23.0	23.0	25.0	25.0	25.0	23.6	21.5	20.1	18.8	18.0	17.3	na	na
	Typical	30.0	30.0	30.0	30.0	30.0	28.6	26.5	25.1	23.8	23.0	22.3	21.8	19.7
ACR (dB / 100m)	Typical	96.5	96.5	94.5	93.0	92.2	90.1	83.9	76.3	68.1	62.8	57.7	53.3	32.6
PSACR (dB / 100m)	Typical	93.5	93.5	91.5	90.0	89.2	87.1	80.9	73.3	65.1	59.8	54.7	50.3	29.6

Product Part Numbering

Part Number	C6STP	C6STP-D	C6STP-HF1	C6STP-HF1-D	C6STP-HF3	C6STP-HF3-D
Outer Sheath	PVC	PVC	LSZH	LSZH	LSZH	LSZH
Construction	Simplex	Duplex	Simplex	Duplex	Simplex	Duplex
Cable Weight	62.6 kg/km	122.0 kg/km	64.1kg/km	127.1 kg/km	65.1 kg/km	129.0 kg/km
Calorific Value	0.22 k Wh/m	0.42 k Wh/m	0.19 k Wh/m	0.39 k Wh/m	0.20 k Wh/m	0.43 k Wh/m
Outer Diameter (nom)	7.5mm	15 x 7.5mm	7.5mm	15 x 7.5mm	7.8mm	15.6 x 7.8mm
Sheath Colour	Grey RAL 7037	Grey RAL 7037	Violet RAL 4005	Violet RAL 4005	Blue RAL 5015	Blue RAL 5015
Fire Safety Rating	IEC 60332-1-2	IEC 60332-1-2	IEC 60332-1-2	IEC 60332-1-2	IEC 60332-3-24	IEC 60332-3-24
Acid Gas Emissions	na	na	IEC 60754-1	IEC 60754-1	IEC 60754-1	IEC 60754-1
Smoke Index	na	na	IEC 61034	IEC 61034	IEC 61034	IEC 61034
Packaging	WRL	WRL	WRL	WRL	WRL	WRL

Independent 3rd Party Certification (3P)

PRODUCT DESCRIPTION:

Cat6Plus S/FTP, 100 Ω, 4x2xAWG 23/1 premium grade Class E/Cat 6 cable to support Gigabit Ethernet protocol for installation in horizontal and backbone areas.

PRODUCT PERFORMANCE:

Core

Conductor:	23 AWG Plain Annealed Copper Wire
Insulation:	Cellular Polyolefin
Diameter:	1.45mm Nominal
Pair:	2 of the above cores
Tape Screen:	Individual pair wrapped with aluminium polyester tape applied metal side out
Pair Colour:	Blue-White, Orange-White Green-White, Brown-White

Final Assembly

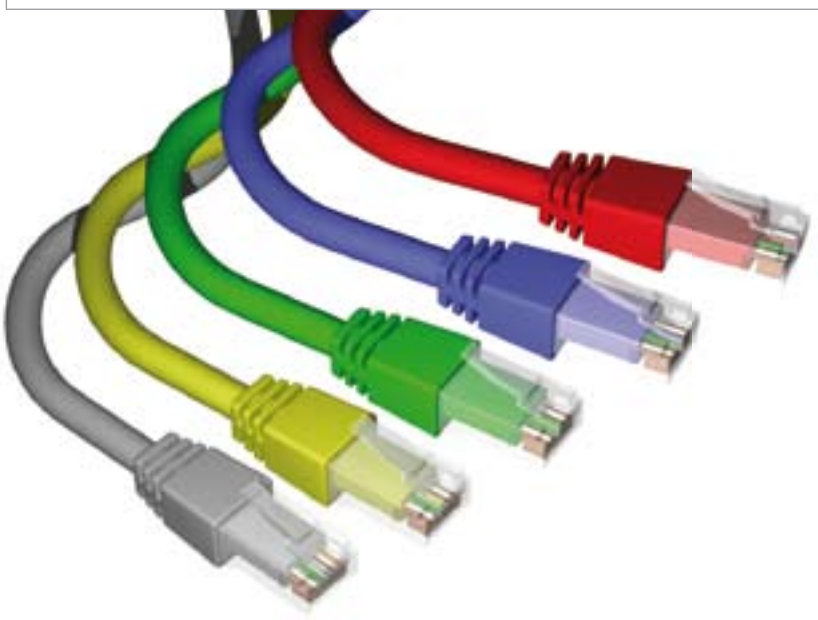
Cable:	4 of the above pairs
Braid Screen:	0.127mm Tinned Annealed Copper Wire
Sheath:	PVC or LSZH compound

Mechanical and Environmental

Temp - Installation:	0°c to +50°c
Temp - Operation:	-20°c to +75°c
Max Tensile Load:	10kg per simplex cable (installation)
Mini Bend Radius:	8 x Outer Diameter (installation) 4 x Outer Diameter (operation)

Packaging

WRL	500m Wooden Reel 1000m Wooden Reel



Compliant with ISO/IEC 61935-2

Brand-Rex Copper Patch Cords - Cat6Plus

Category 6 Blade Patch Cords

THE BRAND-REX 8 POINT PATCH CORD PROMISE

1. Cat6Plus patch cords employ independently verified Category 6 cable
2. Cat6Plus patch cords are manufactured using leading brand Category 6 conformant RJ-45 modular plugs
3. Cat6Plus patch cords are manufactured with a flexible strain relief boot as standard
4. Cat6Plus patch cords are manufactured using only quality approved assembly houses to the exacting requirements of Brand-Rex purchase specification
5. Cat6Plus patch cords are tested in accordance with our AQL plan for Category 6 standards conformance
6. Cat6Plus patch cords are available in screened and unscreened constructions
7. Cat6Plus patch cords carry a no quibble replacement guarantee*
8. Cat6Plus patch cords are incorporated within the Brand-Rex warranty programme

* Any Brand-Rex patch cord that fails to meet the specified requirements of Category 6 will be replaced free of charge

PRODUCT DESCRIPTION:

Brand-Rex Cat6Plus patch cords enable you to get the optimum performance from your cabling system. Our factory made and tested patch cords offer you guaranteed quality, and ensure that your system avoids the performance degradation which inferior alternatives will give you at high data rates. All patch cords are supplied with boots and ID tag.

Part Number Format

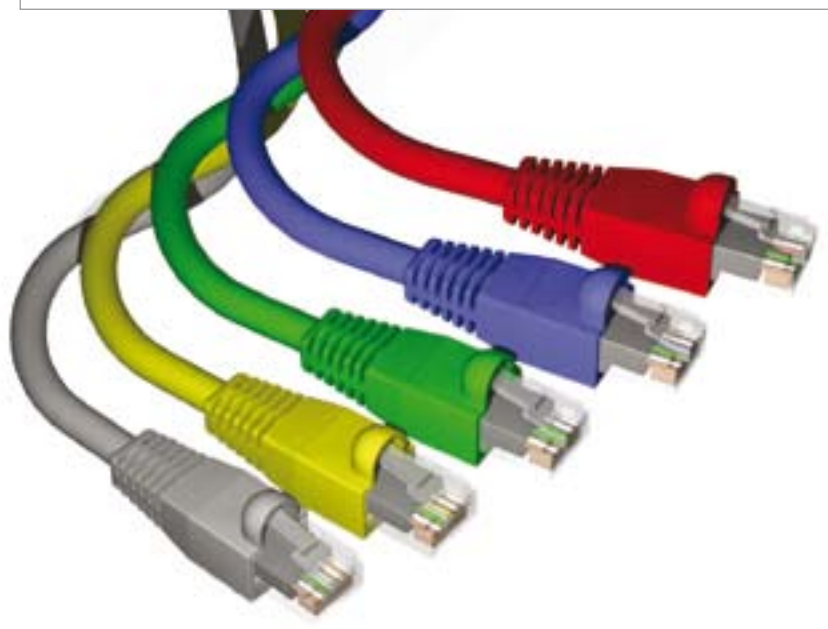
C6C-PC-A-bbb-cde-F

A - Cord Type	bbb - Cord Length	cde - Colour Scheme			F - Speciality Tag
		(c) Cable	(d) Boot 1	(e) Boot 2	
U 24AWG UTP	010 1 metre	1 Red	1 Red	1 Red	S Solid
S 27AWG STP	020 2 metre	1 Red	1 Red	1 Red	X Crossover
	030 3 metre	4 Blue	4 Blue	4 Blue	HB Halogen Free
	050 5 metre	5 Green	5 Green	5 Green	- Standard
	Additional lengths on request	6 Yellow	6 Yellow	6 Yellow	
		8 Grey	8 Grey	8 Grey	
		Additional colours on request			

Product Part Numbering

	Red	Blue	Green	Yellow	Grey
24 AWG UTP - 1.0m	C6CPCU010-111HB	C6CPCU010-444HB	C6CPCU010-555HB	C6CPCU010-666HB	C6CPCU010-888HB
24 AWG UTP - 2.0m	C6CPCU020-111HB	C6CPCU020-444HB	C6CPCU020-555HB	C6CPCU020-666HB	C6CPCU020-888HB
24 AWG UTP - 3.0m	C6CPCU030-111HB	C6CPCU030-444HB	C6CPCU030-555HB	C6CPCU030-666HB	C6CPCU030-888HB
24 AWG UTP - 5.0m	C6CPCU050-111HB	C6CPCU050-444HB	C6CPCU050-555HB	C6CPCU050-666HB	C6CPCU050-888HB
27 AWG SFTP - 1.0m	C6CPCS010-188HB	C6CPCS010-488HB	C6CPCS010-588HB	C6CPCS010-688HB	C6CPCS010-888HB
27 AWG SFTP - 2.0m	C6CPCS020-188HB	C6CPCS020-488HB	C6CPCS020-588HB	C6CPCS020-688HB	C6CPCS020-888HB
27 AWG SFTP - 3.0m	C6CPCS030-188HB	C6CPCS030-488HB	C6CPCS030-588HB	C6CPCS030-688HB	C6CPCS030-888HB
27 AWG SFTP - 5.0m	C6CPCS050-188HB	C6CPCS050-488HB	C6CPCS050-588HB	C6CPCS050-688HB	C6CPCS050-888HB

Non standard colour and length options are available to order on request.



Compliant with ISO/IEC 61935-2

Brand-Rex Copper Patch Cords - Cat6Plus

Category 6 Patch Cords

THE BRAND-REX 8 POINT PATCH CORD PROMISE

1. Cat6Plus patch cords employ independently verified Category 6 cable
2. Cat6Plus patch cords are manufactured using leading brand Category 6 conformant RJ-45 modular plugs
3. Cat6Plus patch cords are manufactured with a flexible strain relief boot as standard
4. Cat6Plus patch cords are manufactured using only quality approved assembly houses to the exacting requirements of Brand-Rex purchase specification
5. Cat6Plus patch cords are tested in accordance with our AQL plan for Category 6 standards conformance
6. Cat6Plus patch cords are available in screened and unscreened constructions
7. Cat6Plus patch cords carry a no quibble replacement guarantee*
8. Cat6Plus patch cords are incorporated within the Brand-Rex warranty programme

* Any Brand-Rex patch cord that fails to meet the specified requirements of Category 6 will be replaced free of charge

PRODUCT DESCRIPTION:

Brand-Rex Cat6Plus patch cords enable you to get the optimum performance from your cabling system. Our factory made and tested patch cords offer you guaranteed quality, and ensure that your system avoids the performance degradation which inferior alternatives will give you at high data rates. All patch cords are supplied with boots and ID tag.

Part Number Format

C6C-PC-A-bbb-cde-F

A - Cord Type	bbb - Cord Length	cde - Colour Scheme			F - Speciality Tag
		(c) Cable	(d) Boot 1	(e) Boot 2	
U 24AWG UTP	010 1 metre	1 Red	1 Red	1 Red	S Solid
S 27AWG STP	020 2 metre	4 Blue	4 Blue	4 Blue	X Crossover
	030 3 metre	5 Green	5 Green	5 Green	H Halogen Free
	050 5 metre	6 Yellow	6 Yellow	6 Yellow	- Standard
	Additional lengths on request	8 Grey	8 Grey	8 Grey	
		Additional colours on request			

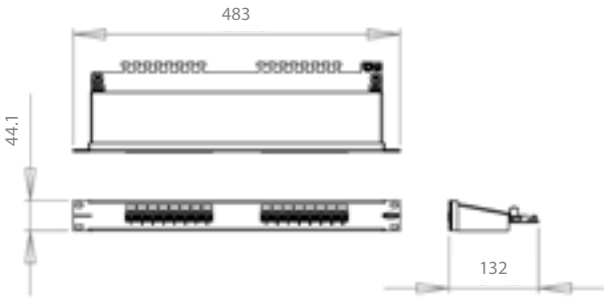
Product Part Numbering

	Red	Blue	Green	Yellow	Grey
24 AWG UTP - 1.0m	C6CPCU010-111H	C6CPCU010-444H	C6CPCU010-555H	C6CPCU010-666H	C6CPCU010-888H
24 AWG UTP - 2.0m	C6CPCU020-111H	C6CPCU020-444H	C6CPCU020-555H	C6CPCU020-666H	C6CPCU020-888H
24 AWG UTP - 3.0m	C6CPCU030-111H	C6CPCU030-444H	C6CPCU030-555H	C6CPCU030-666H	C6CPCU030-888H
24 AWG UTP - 5.0m	C6CPCU050-111H	C6CPCU050-444H	C6CPCU050-555H	C6CPCU050-666H	C6CPCU050-888H
27 AWG SFTP - 1.0m	C6CPCS010-111H	C6CPCS010-444H	C6CPCS010-555H	C6CPCS010-666H	C6CPCS010-888H
27 AWG SFTP - 2.0m	C6CPCS020-111H	C6CPCS020-444H	C6CPCS020-555H	C6CPCS020-666H	C6CPCS020-888H
27 AWG SFTP - 3.0m	C6CPCS030-111H	C6CPCS030-444H	C6CPCS030-555H	C6CPCS030-666H	C6CPCS030-888H
27 AWG SFTP - 5.0m	C6CPCS050-111H	C6CPCS050-444H	C6CPCS050-555H	C6CPCS050-666H	C6CPCS050-888H

Non standard colour and length options are available to order on request.

Brand-Rex Copper Connectivity - Cat6Plus Panels

Category 6 Panel with cable management



Product Part Numbering

	16 Port	24 Port
Shielded Panel LSA Style - Black	C6CPNLF160K2M	C6CPNLF240K2M
Shielded Panel LSA Style - Grey	C6CPNLF160K8M	C6CPNLF240K8M
Unshielded Panel LSA Style - Black	C6CPNLU160K2M	C6CPNLU240K2M
Unshielded Panel LSA Style - Grey	C6CPNLU160K8M	C6CPNLU240K8M
Unshielded Panel 110 Style - Black	C6CPNLU16012M	C6CPNLU24012M
Unshielded Panel 110 Style - Grey	C6CPNLU16018M	C6CPNLU24018M

PRODUCT DESCRIPTION:

The Cat6Plus 19" rack mounted patch panel offers true Category 6 component performance using a new patented contact pin array design.
All panels are backward compatible. The modular jacks that are used in blocks of 8 are individually shielded to give superior shielding.

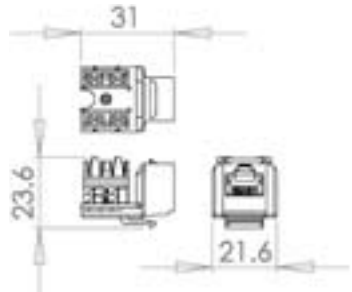
In addition to this, each panel has been designed with a cable management/strain relief feature built into the rear. All outlets are numerically identified with an additional writable surface for ease of port naming. Each panel is supplied with cable ties, panel mounting accessories and short form installation instructions.

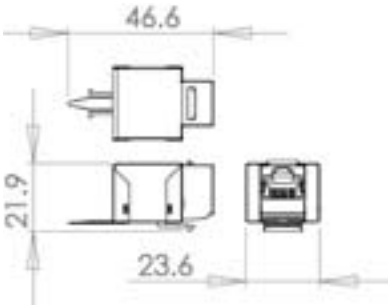
PRODUCT CHARACTERISTICS:

Panel Width:	19" (483mm)
Panel Height:	1U (44.1mm)
Panel Depth:	132mm
Outlet Style:	Unkeyed RJ-45
Outlets:	16 or 24 ports
Colour:	RAL 9005 Black or RAL 7035 Grey
Punch Down Blocks:	LSA style IDC
Wiring Standard:	EIA/TIA 568A/B
Conformance:	Category 6 ANSI/EIA/TIA 568B.2.1 : 2002 ISO/IEC 11801 : 2002 EN50173-1 : 2002
Approval:	(3P) Independent 3rd Party Certification

Brand-Rex Copper Connectivity - Cat6Plus Jacks

Category 6 Snap-In-Jacks





Product Part Numbering

	Unshielded	Shielded
LSA Style - Black	C6CJAKU0K2	C6CJAKF0K2
LSA Style - White	C6CJAKU0K3	-
110 Style - Black	C6CJAKU012	-
110 Style - White	C6CJAKU013	-

Other colours available on request.

PRODUCT DESCRIPTION:

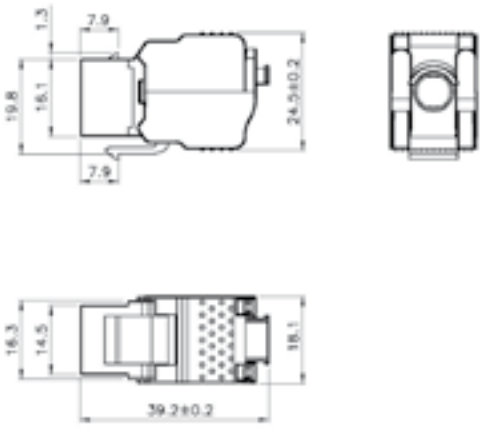
The Brand-Rex Cat6Plus Snap-In-Jack offers true Category 6 component performance using a new patented contact array design. The jack is backward compatible and also fully compatible with all our UK and continental style faceplates and products. Jacks are supplied with a short form installation instruction.

PRODUCT CHARACTERISTICS:

Outlet Style:	Unshielded and shielded Keystone type with RJ-45 ports
Cable Entry:	Top and Rear
Hole Plate Thickness:	Jack will clip into sheet material with a thickness of 1.6mm max.
Body Material:	High impact PBT UL94 - VO
Jack Contacts:	Phosphor Bronze
Plating:	50 µm gold over 100 µm of nickel
Punch Down Blocks:	LSA (Shielded) LSA or 110 (Unshielded) style IDC
IDC Contacts:	Phosphor Bronze
Wiring Standard:	EIA/TIA 568A/B
Conformance:	Category 6 ANSI/EIA/TIA 568B.2.1 : 2002 ISO/IEC 11801 : 2002 EN50173-1 : 2002
Approval:	(3P) Independent 3rd Party Certification

Brand-Rex Copper Connectivity - Cat6Plus Jacks

Category 6 Keystone Jack



Product Part Numbering

Description	Product Part Number
Category 6 Shielded Jack	C6CJAKS000CR

Compatible System Products:

Description	Product Part Number
24 Port In-Line Snap-in-Jack Panel	MMCPNLX24SIJ2MIL
24 Port Staggered Snap-in-Jack Panel	MMCPNLX24SIJ2
24 Port Angled Snap-in-Jack Panel	MMCPNLX24SIJ2MAN
24 Port Coloured Insert Snap-in-Jack Panel - Black	MMCPNLX24SIJ2CII
24 Port Coloured Insert Snap-in-Jack Panel - Grey	MMCPNLX24SIJ8CII

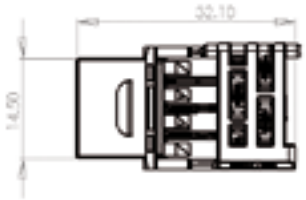
PRODUCT DESCRIPTION:

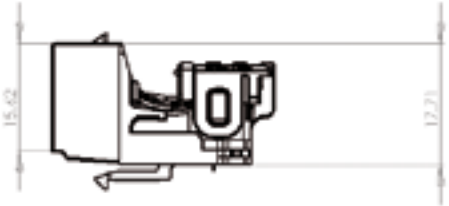
The Cat6Plus Snap-In-Jack offers true Category 6 component performance and quick tool-free wire termination with push down wire manager. The metal housing of the Keystone Jack is designed to provide a superior electromagnetic shielding performance. The jack is fully compatible with all our UK and continental style faceplates and products. Jacks are supplied with installation instructions.

PRODUCT CHARACTERISTICS:

Outlet Style:	Shielded Keystone type with Unkeyed RJ-45 ports
Cable Entry:	Rear
Hole Plate Thickness:	1.6mm Max
Body Material:	Shield – Bronze, nickel-plated housing – ABS/PC, UL94-V2 rated body – Zinc Die-casting nickel-plated
Jack Contacts:	Phosphor Bronze
Plating:	50 µm of gold over 40 µm of nickel
Punch Down Blocks:	Tool-free with push down cable manager for wire AWG 22-27 solid and stranded
Wire Terminations:	Tool-free with CAP
IDC Contacts:	Phosphor Bronze with 50 µm of plated tin
Wiring Standard:	EIA/TIA 568A & EIA/TIA 568B
Conformance:	Category 6 compliant - can support 10GBASE-T in a channel configuration

Brand-Rex Copper Connectivity - Cat6Plus Jacks
Category 6 Tool-free Jack





PRODUCT DESCRIPTION:
The Tool-free Jack offers true Cat6 performance and is fully compatible with Brand-Rex UK and continental UNI style faceplates and products. The jacks come supplied in boxes of 12; termination instructions are on the rear of the box. No termination tool is required. Each jack has integral colour code wiring labels.

PRODUCT CHARACTERISTICS:

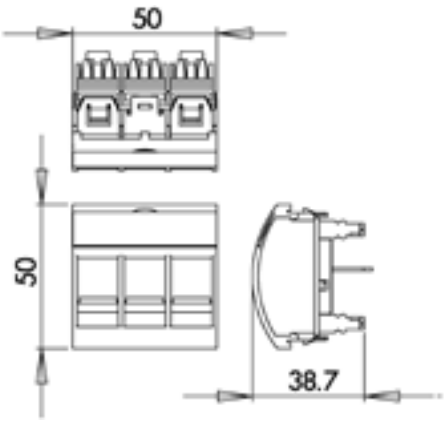
Outlet Style:	Unshielded with un-keyed RJ-45 port
Cable Entry:	Rear, top and bottom
Colour:	Black translucent
Body Materials:	UL94 – V0
Jack Contacts:	Phosphor bronze, Plating 50 µm gold over 100 µm of nickel
Termination Block Material:	UL94-V0
IDC Contacts:	Titanium copper, tin plated
Wiring Standard:	EIA/TIA 568 A & B
Conformance:	Backwards compatible to the Class D standards ISO/IEC 11801 : 2002, ANSI/EIA/TIA 568B.2.2002

Compliant with the new draft Cat6A standards:
ISO/IEC 11801 amendments 1.1 & 1.2
ANSI/EIA/TIA 568B.2-10

Product Part Numbering

	Product Part Number
Category 6 Tool-free Jack	C6CJAKU002

Brand-Rex Copper Connectivity - Cat6Plus Outlets
Category 6 Triple Shuttered Outlet



PRODUCT DESCRIPTION:
The Brand-Rex Cat6Plus Unshielded Triple Outlet offers a high density outlet solution with true Category 6 component performance. The outlet is backward compatible with our UK and continental UNI style faceplates providing a 3 or 6 RJ-45 solution for high density outlet installations.

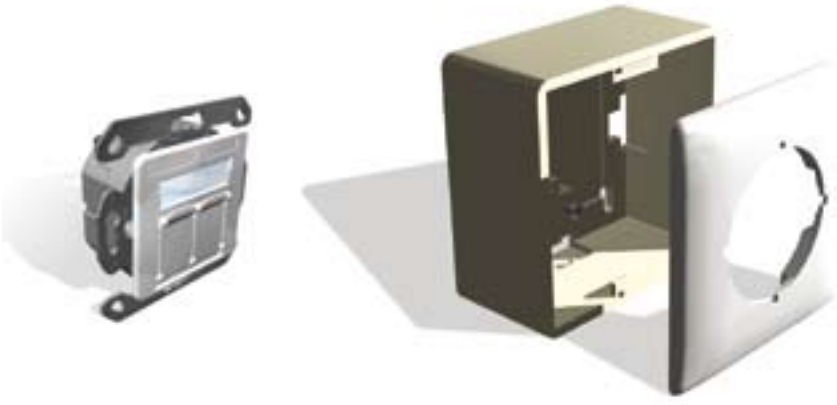
Each outlet is fitted with a removable label protector with individual rear cable anchors and colour wiring detail. Every outlet is supplied in an easy tear pack with a shortform installation instruction, paper label and cable ties.

PRODUCT CHARACTERISTICS:

Outlet Style:	Unkeyed RJ-45
Faceplate Style:	UK / Continental UNI style compatible
Backbox:	Minimum 32mm depth
Colour:	RAL 9010 White
Weight:	46g
Body Material:	ABS
Jack Contacts:	Phosphor Bronze
Plating:	50µm gold over 100µm nickel
Punch Down Blocks:	110 Style IDC
Wiring Standard:	EIA/TIA 568A/B
Conformance:	Category 6 ANSI/EIA/TIA 568B.2.1:2002 ISO/IEC 11801:2002 EN50173-1:2002
Approval:	(3P) Independent 3rd Party Certification

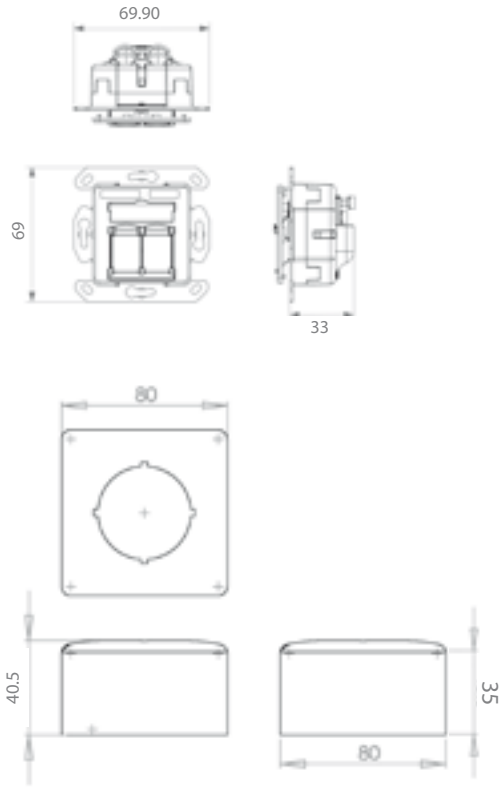
Product Part Numbering

	Unshielded
Triple Outlet - White	C6CTWOU013



Brand-Rex Copper Connectivity - Cat6Plus Outlets

Category 6 European Style Outlet



PRODUCT DESCRIPTION:

The Brand-Rex combined shielded outlet and RJ-45 socket has the same proven Category 6 performance as our Cat6Plus panels. Primarily designed for mounting into duct or trunking using a 45mm diameter hole, the outlet can be either flush or wall mounted by using the 80 x 80mm continental styled faceplate and 33mm back box.

PRODUCT CHARACTERISTICS:

Outlet Style:	Shielded Keystone type with unkeyed RJ-45 ports
Cable Entry:	Horizontal and Vertical
Colour:	RAL 1013 Ivory RAL 9010 White
Body Material:	High impact PPO UL94 - VO Zinc Alloy Diecast closed housing
Jack Contacts:	Phosphor Bronze
Plating:	50 µm gold over 100 µm of nickel
Punch Down Blocks:	LSA style IDC
IDC Contacts:	Phosphor Bronze
Wiring Standard:	EIA/TIA 568A/B
Conformance:	ISO/IEC 11801 : 2002, EIA/TIA 568B.2.1 : 2002 and EN50173-1 : 2002

Product Part Numbering

	White	Ivory
1 Way Shielded Outlet	C6CG145SU002	C6CG145SU001
2 Way Shielded Outlet	C6CG245SU002	C6CG245SU001
80mm x 80mm Faceplate and Back Box	MMCWDOSMA002	MMCWDOSMA001

Brand-Rex Copper Connectivity - Cat6Plus Cross-Connect
Category 6 Cross-Connect Tower Units

PRODUCT DESCRIPTION:
The tower mount frame provides a modular, high density, cross-connect and cable management system. The base tower is supplied as a 288 pair unit but the capacity can be increased using additional extension frames. Tower units are supplied with wiring bases and connector blocks for 288 pair.

PRODUCT CHARACTERISTICS:
Material: Mild steel,
Black powder coated

Dimensions:

288 pair mounting frame
546.1 x 215.9 x 235.0mm

288 pair extension mounting frame
416.0 x 215.9 x 88.9mm

Vertical cable organiser
546.1 x 215.9 x 235.0mm

Vertical cable organiser extension
426.5 x 215.9 x 228.6mm

Product Part Numbering

110 Tower, 288 pair mounting frame	C6C110TWR288P
110 Tower, 288 pair extension mounting frame	C6C110TWR288PE

Brand-Rex Copper Connectivity - Cat6Plus Cross-Connect
Category 6 Cross-Connect Patchcord

PRODUCT DESCRIPTION:
Cross-connect patchcords are available in 110 to 110 style or 110 to RJ45 style. The standard Category 6 110 connector is supplied in a 4 pair version only.

PRODUCT CHARACTERISTICS:

Conformance:	Category 6 ANSI/TIA/EIA 568B.2.1
Cord type:	Grey 24AWG UTP 110 – 110
Dimensions:	50.2 x 30.9 x 9.0mm
Temperature Range:	0 to 50 °C (installation) -20 to 75 °C (operational)

Product Part Numbering

	110 – 110	110 – RJ45
Cross Connect Patch Cord - 1.0m	C6C110110PC010	C6C110RJ4PC010
Cross Connect Patch Cord - 1.5m	C6C110110PC015	C6C110RJ4PC015
Cross Connect Patch Cord - 2.0m	C6C110110PC020	C6C110RJ4PC020
Cross Connect Patch Cord - 3.0m	C6C110110PC030	C6C110RJ4PC030
Cross Connect Patch Cord - 4.0m	C6C110110PC040	C6C110RJ4PC040
Cross Connect Patch Cord - 5.0m	C6C110110PC050	C6C110RJ4PC050

Brand-Rex Copper Connectivity - Cat6Plus Cross-Connect
Category 6 Cross-Connect Insertion Tool

PRODUCT DESCRIPTION:
To ensure correct termination of Brand-Rex's Category 6 Cross Connect solution it is advised to use a specially designed Insertion tool. The insertion tool is used to simultaneously terminate the 4 pairs onto Category 6 Cross Connect wiring bases and underneath the Category 6 connector block. A Replacement Head is also available when the tool becomes worn.

Product Part Numbering

Category 6 110 4 pair Insertion Tool	C6C1104PIT
Category 6 110 4 pair Replacement Head	C6C1104PITRH

Brand-Rex Copper Connectivity - Cat6Plus Cross-Connect
Category 6 Cross-Connect Wiring Bases and Connector Blocks

Product Part Numbering

Category 6 110 wiring base 48 pair with legs	C6C110WB48PL
Category 6 110 wiring base 48 pair without legs	C6C110WB48P
Category 6 110 wiring base 48 pair with legs, Kit	C6C110WB48PLK
Category 6 110 wiring base 48 pair without legs, Kit	C6C110WB48PK
Category 6 110 wiring base 96 pair with legs	C6C110WB96PL
Category 6 110 wiring base 96 pair without legs	C6C110WB96P
Category 6 110 wiring base 96 pair with legs, Kit	C6C110WB96PLK
Category 6 110 wiring base 96 pair without legs, Kit	C6C110WB96PK
Category 6 110 wiring base 288 pair with legs	C6C110WB288PL
Category 6 110 wiring base 288 pair without legs	C6C110WB288P
Category 6 110 wiring base 288 pair with legs, Kit	C6C110WB288PLK
Category 6 110 wiring base 288 pair without legs, Kit	C6C110WB288PK
Category 6 110 wiring base 96 pair rack mounted, Kit	C6C110WB96PRK
Category 6 110 wiring base 192 pair rack mounted, Kit	C6C110WB192PRK
Category 6 110 wiring base 288 pair rack mounted, Kit	C6C110WB288PRK
Category 6 110 Connector Block	C6C110CB4P

PRODUCT DESCRIPTION:

Wiring Base
The Category 6 110 wiring base can be supplied as a 48, 96 or 288 pair version, with or without legs. It can also be supplied rack mounted as a 96, 192 or 288 pair version. Designation labels are included with the bases.

48 Pair Wiring Base Kits
A typical kit for a 48 pair wiring base includes a basic wiring base and 12 off 4 pair connector blocks.

96 Pair Wiring Base Kits
A typical kit for a rack mounted 96 pair wiring base includes 2 off 48 pair wiring base and 24 off 4 pair connector blocks.

Connector Block
The 4 pair connector is specifically designed to exceed Category 6 performance, has a robust design and is colour coded for easy identification. The connector is supplied in bags of 10.

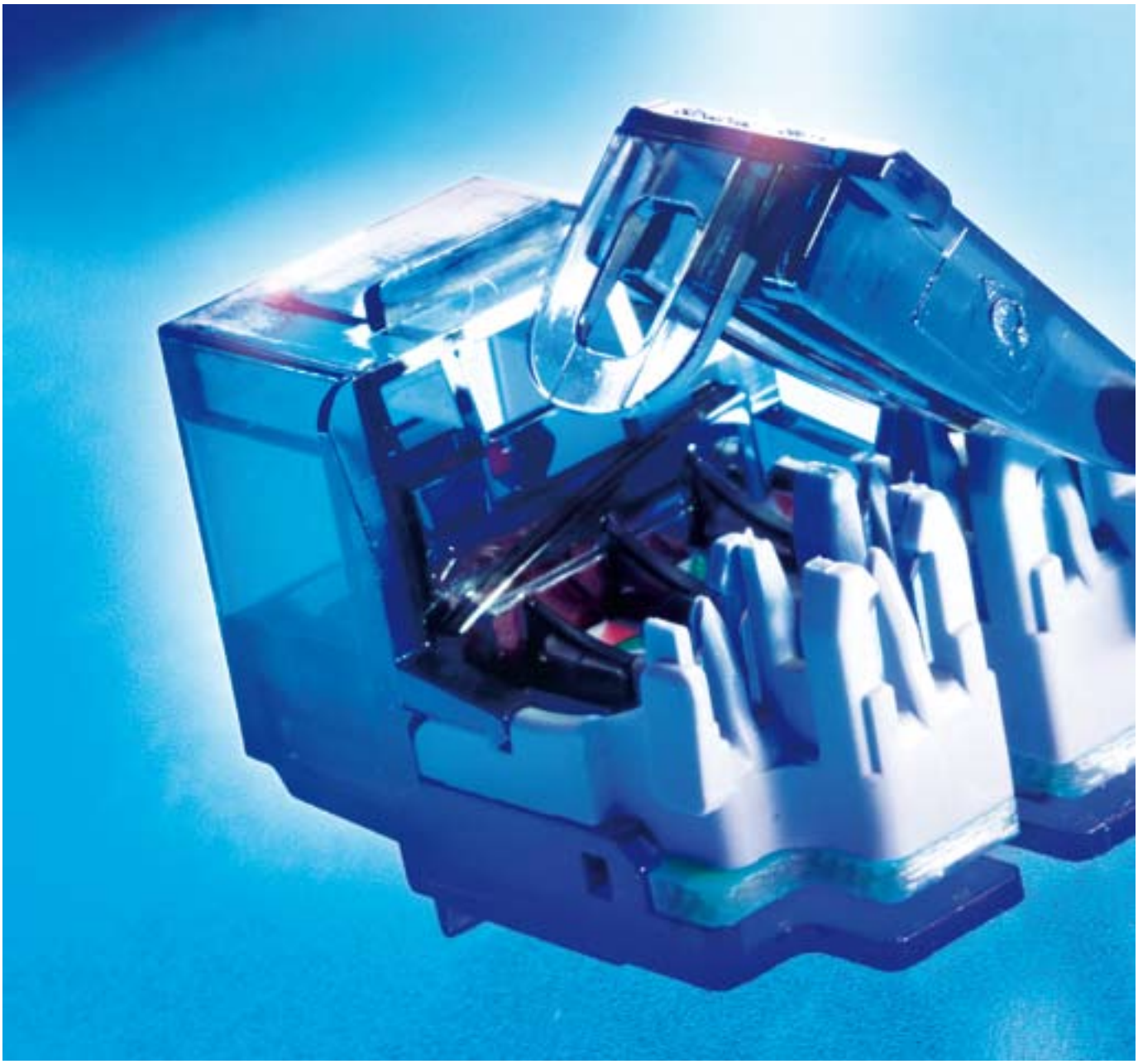
PRODUCT CHARACTERISTICS:

Conformance: Category 6 ANSI/TIA/EIA 568B.2.1

Connector Block
Material: Flame retardent thermoplastic rated UL94V-0, off-white

Wiring Base
Material: Flame retardent thermoplastic rated UL94V-0, off-white

Contact Material: Copper Alloy, tin plated



BRAND-REX GIGAPLUS SYSTEM (CATEGORY 5E - CLASS D):

Key Features

- GigaPlus is a fully standards compliant open system
- GigaPlus exceeds the requirements of ISO/IEC 11801 : 2002 and EN 50173-1 : 2002 for Class D channels and ANSI/TIA/EIA 568B.2 : 2002 Category 5e
- GigaPlus is third certified by 3P and GHMT
- GigaPlus provides a secure, cost-effective and flexible Cat5e cabling system solution for running today's LAN protocols and high speed applications such as 1000Base-T
- Reduced bit error rate as a result of system margins that exceed the standards
- System available in both shielded and unshielded options
- GigaPlus is interoperable and backwards compatible
- GigaPlus can be installed within hostile environments, contact Brand-Rex for recommendations and advice
- GigaPlus is Power over Ethernet compatible and supports
  - VoIP
  - Wireless LAN access points
  - Security cameras
- GigaPlus is suitable for wireless node connection

The GigaPlus System

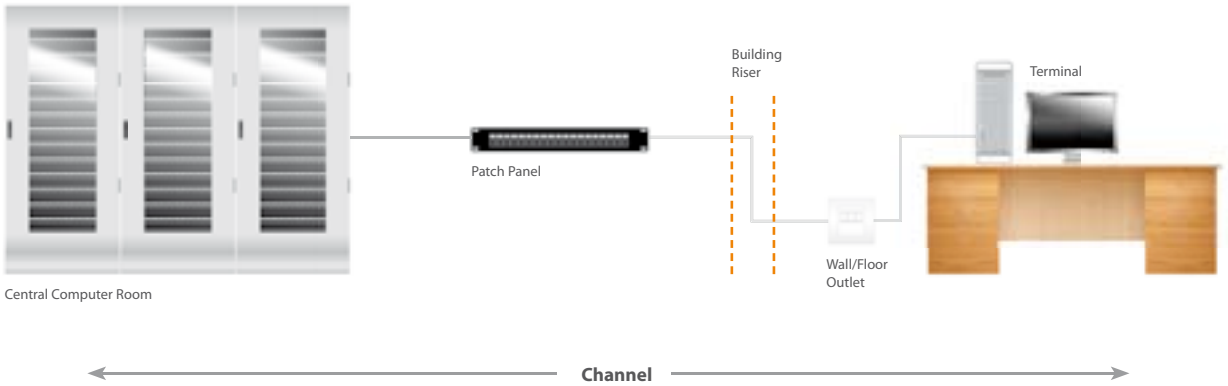
Structured wiring systems comprising of GigaPlus cables, patch cords and connectivity are designed to be compliant with the current sets of Class D / Category 5e published standards requirements as an absolute minimum.

The systems support all protocols defined in current editions, and amendments, of ISO 11801 : 2002, ANSI TIA/EIA 568B.2 : 2002 and EN50173-1-1 : 2002 (including Gigabit Ethernet) and are fully backward compatible.

GigaPlus is a premium grade cabling system that is characterised to 200MHz. Its performance significantly exceeds the requirements specified in the current versions of the published standards for Class D / Category 5e.

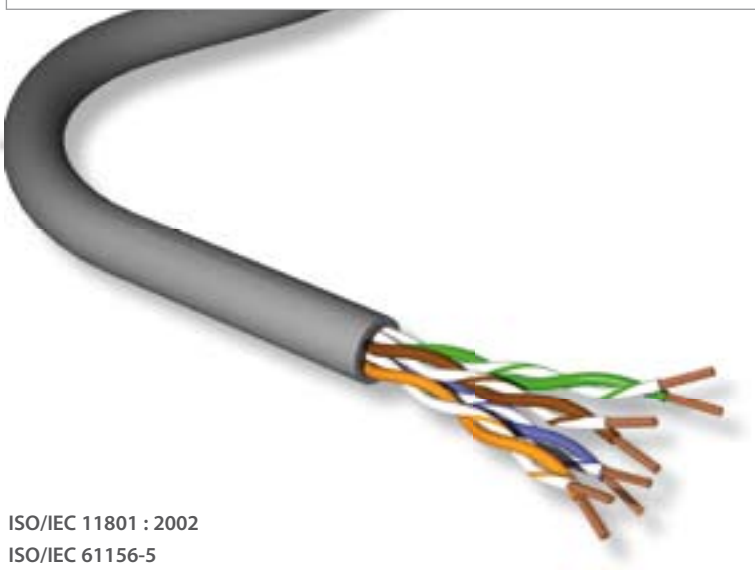
Brand-Rex Copper Cables - GigaPlus Channel Performance

Shielded and Unshielded Systems



4 Connector Channel Performance

Frequency (MHz)		1	4	10	16	20	31.25	62.5	100	125	155	175	200	250
Attenuation (dB)	Typical	2.0	4.0	6.4	8.1	9.1	11.5	16.6	21.3	24.0	27.0	28.8	31.0	32.5
	Spec	2.3	4.6	7.3	9.3	10.4	13.2	19.1	24.7	na	na	na	na	na
NEXT (dB)	Typical	73.6	62.3	54.9	51.0	49.2	45.5	39.8	35.9	34.0	32.2	31.2	30.1	30.1
	Spec	60.0	53.5	47.0	43.6	42.0	38.7	33.6	30.1	na	na	na	na	na
PSNEXT (dB)	Typical	70.6	59.3	51.9	48.0	46.2	42.5	36.8	32.9	31.0	29.2	28.2	27.1	29.7
	Spec	57.0	50.5	44.0	40.6	39.0	35.7	30.6	27.1	na	na	na	na	na
Return Loss (dB)	Typical	22.0	22.0	22.0	22.0	22.0	20.1	17.1	15.0	14.0	13.1	12.6	12.0	11.8
	Spec	17.0	17.0	17.0	17.0	17.0	15.1	12.1	10.0	na	na	na	na	na
ELFEXT (dB)	Typical	70.0	57.9	50.0	45.9	44.0	40.1	34.1	30.0	28.0	26.2	25.1	24.0	26.4
	Spec	57.4	45.3	45.3	33.3	31.4	27.5	21.5	17.4	na	na	na	na	na
PSELFEXT (dB)	Typical	67.0	54.9	47.0	42.9	41.0	37.1	31.1	27.0	25.0	23.2	22.1	21.0	24.6
	Spec	54.4	54.4	37.4	30.3	28.4	24.5	18.5	14.4	na	na	na	na	na
Propagation Delay (ns)	Typical	520	510	505	503	502	501	500	500	500	500	500	500	505
	Spec	<555	<555	<555	<555	<555	<555	<555	<555	na	na	na	na	na
Delay Skew (ns)	Typical	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20
	Spec	<50	<50	<50	<50	<50	<50	<50	<50	na	na	na	na	na
ACR (dB / 100m)	Typical	71.6	58.3	48.5	42.9	40.0	34.0	23.2	14.6	10.0	5.2	2.4	-0.9	-0.8
PSACR (dB / 100m)	Typical	68.6	55.3	45.5	39.9	37.0	31.0	20.2	11.6	7.0	2.2	-0.6	-3.9	-1.5
Alien NEXT (dB)	Typical	103.6	92.3	84.9	81.0	79.2	75.5	69.8	65.9	64.0	62.2	61.2	60.1	59.2



ISO/IEC 11801 : 2002
ISO/IEC 61156-5
EN 50173-1 : 2002
EN 50288-3-1
ANSI/TIA/EIA 568B.2 : 2002

Brand-Rex Copper Cables - GigaPlus

Communication Cable, U/UTP, 100 Ω, 4x2xAWG 24/1

Electrical Characteristics @ 20°c	Specification	Typical Performance
Conductor Loop Resistance	Max 19 Ω / 100m	16 Ω / 100m
Conductor Resistance Unbalance	Max 2%	0.5%
Dielectric Strength	1.0kV dc or 0.7kV ac for 1 min	100% in process test
Insulation Resistance	>500MΩ.km @ 100-500 V test voltage	>5 GΩ.km
Capacitance Unbalance to Earth	Max 160 pF/100m	40 pF/100m
Velocity of Propagation	<534 nsec/100m @ 100MHz	496 nsec/100m @ 100MHz (NVP for hand held testers = 0.69)
Skew	Max 40 nsec/100m @ 100MHz	25 nsec/100m @ 100MHz
Mean Characteristic Impedance	100 Ω +/- 5 Ω @ 100MHz	100 Ω +/- 3 Ω @ 100MHz
Coupling Attenuation up to 1Ghz	Min 40 dB	50dB

Frequency (MHz)		1	4	10	16	20	31.25	62.5	100	155	200	250
Insertion Loss (dB / 100m)	Spec	2.1	4.0	6.3	8.0	9.0	11.4	16.5	21.3	na	na	na
	Typical	1.8	3.6	5.8	7.4	8.3	10.5	15.3	19.8	25.4	29.4	33.4
NEXT (dB)	Spec	65.3	56.3	50.3	47.3	45.8	42.9	38.4	35.3	na	na	na
	Typical	73.3	64.3	58.3	55.2	53.8	50.9	46.4	43.3	40.4	38.8	37.3
PSNEXT (dB)	Spec	62.3	53.3	47.3	44.2	42.8	39.9	35.4	32.3	na	na	na
	Typical	71.3	62.3	56.3	53.2	51.8	48.9	44.4	41.3	38.4	36.8	35.3
ELFEXT (dB / 100m)	Spec	63.8	51.8	43.8	39.7	37.8	33.9	27.9	23.8	na	na	na
	Typical	78.8	66.8	58.8	54.7	52.8	48.9	42.9	38.8	35.0	32.8	31.5
PSELFEXT (dB / 100m)	Spec	60.8	48.8	40.8	36.7	34.8	30.9	24.9	20.8	na	na	na
	Typical	76.8	64.8	56.8	52.7	50.8	46.9	40.9	36.8	33.0	30.8	29.5
Return Loss (dB / 100m)	Spec	na	23.1	25.0	25.0	25.0	23.6	21.5	20.1	na	na	na
	Typical	25.0	28.0	30.0	30.0	30.0	38.6	26.5	25.1	23.8	23.0	22.8
ACR (dB / 100m)	Typical	71.5	60.7	52.5	47.8	45.5	40.4	31.1	23.5	15	9.4	3.9
PSACR (dB / 100m)	Typical	69.5	58.7	50.5	45.8	43.5	38.4	29.1	21.5	13	7.4	1.9

Product Part Numbering

Part Number	GPU	GPU-D	GPU-HF1	GPU-HF1-D	GPU-HF3	GPU-HF3-D
Outer Sheath	PVC	PVC	LSZH	LSZH	LSZH	LSZH
Construction	Simplex	Duplex	Simplex	Duplex	Simplex	Duplex
Cable Weight	31.0 kg/km	62.0 kg/km	32.5kg/km	65.0 kg/km	44.0 kg/km	88.0 kg/km
Calorific Value	0.11 k Wh/m	0.22 k Wh/m	0.11 k Wh/m	0.22 k Wh/m	0.18 k Wh/m	0.36 k Wh/m
Outer Diameter (nom)	4.85mm	9.8 x 4.85mm	5.0mm	10.1 x 5.0mm	5.8mm	11.7 x 5.8mm
Sheath Colour	Grey RAL 7037	Grey RAL 7037	Violet RAL 4005	Violet RAL 4005	Blue RAL 5015	Blue RAL 5015
Fire Safety Rating	IEC 60332-1-2	IEC 60332-1-2	IEC 60332-1-2	IEC 60332-1-2	IEC 60332-3-24	IEC 60332-3-24
Acid Gas Emissions	na	na	IEC 60754-1	IEC 60754-1	IEC 60754-1	IEC 60754-1
Smoke Index	na	na	IEC 61034	IEC 61034	IEC 61034	IEC 61034
Packaging	RLX / WRL	WRL	RLX / WRL	WRL	WRL	WRL

Independent 3rd Party Certification (3P)

PRODUCT DESCRIPTION:
GigaPlus U/UTP 100 Ω 4x2xAWG 24/1 premium grade Class D/Cat5e cable to support Gigabit Ethernet protocol for installation in horizontal and backbone areas.

PRODUCT PERFORMANCE:

Core

Conductor:	24 AWG Plain Annealed Copper Wire
Insulation:	Polyolefin
Diameter:	0.94mm Nominal
Pair:	2 of the above cores
Pair Colour:	Blue-White, Orange-White, Green-White, Brown-White

Final Assembly

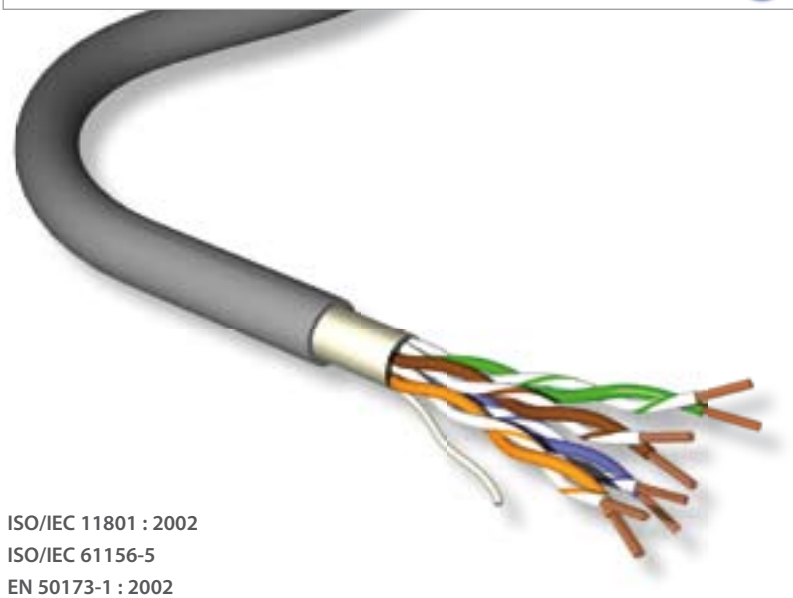
Cable:	4 of the above pairs
Sheath:	PVC or LSZH compound

Mechanical and Environmental

Temp - Installation:	0°c to +50°c
Temp - Operation:	-20°c to +75°c
Max Tensile Load:	10kg per simplex cable (installation)
Min Bend Radius:	8 x Outer Diameter (installation) 4 x Outer Diameter (operation)

Packaging

RLX	305m Reelex Box 500m Reelex Box
WRL	500m Wooden Reel 1000m Wooden Reel



ISO/IEC 11801 : 2002
ISO/IEC 61156-5
EN 50173-1 : 2002
EN 50288-2-1
ANSI/TIA/EIA 568B.2 : 2002

Brand-Rex Copper Cables - GigaPlus

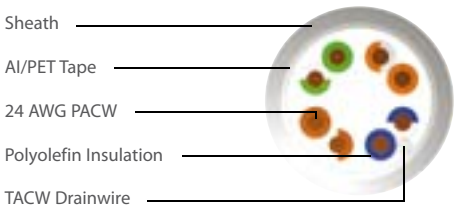
Communication Cable, F/UTP, 100 Ω, 4x2xAWG 24/1

Electrical Characteristics @ 20°c	Specification	Typical Performance
Conductor Loop Resistance	Max 19 Ω / 100m	16 Ω / 100m
Conductor Resistance Unbalance	Max 2%	0.5%
Dielectric Strength	1.0kV dc or 0.7kV ac for 1 min	100% in process test
Insulation Resistance	>500MΩ.km @ 100-500 V test voltage	>5 GΩ.km
Capacitance Unbalance to Earth	Max 160 pF/100m	40 pF/100m
Velocity of Propagation	<537.6 nsec/100m @ 100MHz	496 nsec/100m @ 100MHz (NVP for hand held testers = 0.68)
Skew	Max 40 nsec/100m @ 100MHz	25 nsec/100m @ 100MHz
Mean Characteristic Impedance	100 Ω +/- 5 Ω @ 100MHz	100 Ω +/- 3 Ω @ 100MHz
Transfer Impedance	Max 100 mΩ/m @ 100 MHz	30 mΩ/m @ 10MHz (ISO 61156 grade 2 cable)
Coupling Attenuation up to 1Ghz	Min 55 dB	75 dB

Frequency (MHz)		1	4	10	16	20	31.25	62.5	100	155	200	250
Insertion Loss (dB / 100m)	Spec	2.1	4.0	6.3	8.0	9.0	11.4	16.5	21.4	na	na	na
	Typical	2.0	3.8	6.0	7.6	8.6	10.8	15.8	20.4	26.1	30.3	34.5
NEXT (dB)	Spec	65.3	56.3	50.3	47.2	45.8	42.9	38.4	35.3	na	na	na
	Typical	73.3	64.3	58.3	55.2	53.8	50.9	46.4	43.3	40.4	38.3	37.3
PSNEXT (dB)	Spec	62.3	53.3	47.3	44.2	42.8	39.9	35.4	32.3	na	na	na
	Typical	70.3	61.3	55.3	52.2	50.8	47.9	43.4	40.3	37.4	35.8	34.3
ELFEXT (dB / 100m)	Spec	63.8	51.8	43.8	39.7	37.8	33.9	27.9	23.8	na	na	na
	Typical	78.8	66.8	58.8	54.7	52.8	48.9	42.9	38.8	35.0	32.8	30.8
PSELFEXT (dB / 100m)	Spec	60.8	48.8	40.8	36.7	34.8	30.9	24.9	20.8	na	na	na
	Typical	76.8	64.8	56.8	52.7	50.8	46.9	40.9	36.8	33.0	30.8	28.8
Return Loss (dB / 100m)	Spec	na	23.0	25.0	25.0	25.0	23.6	21.5	20.1	na	na	na
	Typical	25.0	28.0	30.0	30.0	30.0	28.6	26.5	25.1	23.8	23.0	22.3
ACR (dB / 100m)	Typical	71.3	60.5	52.3	47.6	45.2	40.0	30.6	22.9	14.3	8.5	2.9
PSACR (dB / 100m)	Typical	68.3	57.5	49.3	44.6	42.2	37.0	27.6	19.9	11.3	5.5	-0.1

Product Part Numbering

Part Number	GPF	GPF-D	GPF-HF1	GPF-HF1-D	GPF-HF3	GPF-HF3-D
Outer Sheath	PVC	PVC	LSZH	LSZH	LSZH	LSZH
Construction	Simplex	Duplex	Simplex	Duplex	Simplex	Duplex
Cable Weight	38.5 kg/km	77.0 kg/km	38.5kg/km	77.0 kg/km	54.6 kg/km	109.2 kg/km
Calorific Value	0.14 k Wh/m	0.28 k Wh/m	0.12 k Wh/m	0.24 k Wh/m	0.16 k Wh/m	0.32 k Wh/m
Outer Diameter (nom)	5.9mm	11.8 x 5.9mm	5.9mm	11.8 x 5.9mm	6.7mm	13.4 x 6.7mm
Sheath Colour	Grey RAL 7037	Grey RAL 7037	Violet RAL 4005	Violet RAL 4005	Blue RAL 5015	Blue RAL 5015
Fire Safety Rating	IEC 60332-1-2	IEC 60332-1-2	IEC 60332-1-2	IEC 60332-1-2	IEC 60332-3-24	IEC 60332-3-24
Acid Gas Emissions	na	na	IEC 60754-1	IEC 60754-1	IEC 60754-1	IEC 60754-1
Smoke Index	na	na	IEC 61034	IEC 61034	IEC 61034	IEC 61034
Packaging	RLX / WRL	WRL	RLX / WRL	WRL	WRL	WRL



Independent 3rd Party Certification (3P)

PRODUCT DESCRIPTION:

GigaPlus F/UTP 100 Ω 4x2xAWG 24/1 premium grade Class D/Cat5e cable to support Gigabit Ethernet protocol combined with good EMI/RFI protection for installations in horizontal and backbone areas.

PRODUCT PERFORMANCE:

Core

Conductor:	24 AWG Plain Annealed Copper Wire
Insulation:	Polyolefin
Diameter:	1.07mm Nominal
Pair:	2 of the above cores
Pair Colour:	Blue-White, Orange-White Green-White, Brown-White

Final Assembly

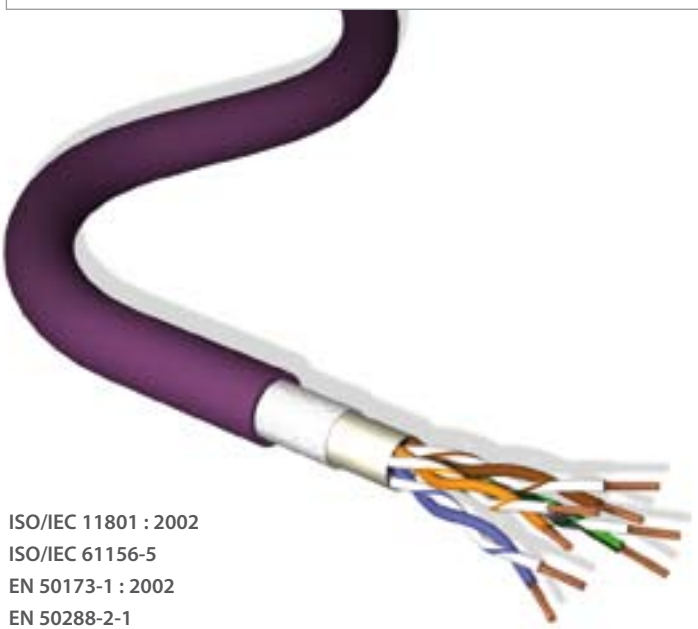
Cable:	4 of the above pairs
Binder:	Wrapped with polyester tape, 100% coverage
Drainwire:	0.5mm Tinned Annealed Copper Wire
Tape Screen:	Wrapped with aluminium polyester tape applied metal side in
Sheath:	PVC or LSZH compound

Mechanical and Environmental

Temp - Installation:	0°c to +50°c
Temp - Operation:	-20°c to +75°c
Max Tensile Load:	10kg per simplex cable (installation)
Min Bend Radius:	8 x Outer Diameter (installation) 4 x Outer Diameter (operation)

Packaging

RLX	305m Reelex Box
WRL	500m Wooden Reel 1000m Wooden Reel



ISO/IEC 11801 : 2002
ISO/IEC 61156-5
EN 50173-1 : 2002
EN 50288-2-1
ANSI/TIA/EIA 568B.2 : 2002

Brand-Rex Copper Cables - GigaPlus

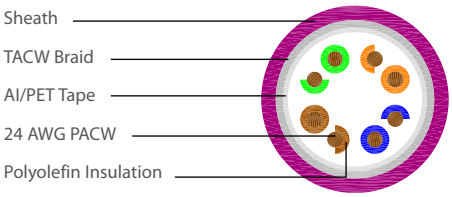
Communication Cable, SF/UTP, 100 Ω, 4x2xAWG 24/1

Electrical Characteristics @ 20°c	Specification	Typical Performance
Conductor Loop Resistance	Max 19 Ω / 100m	16 Ω / 100m
Conductor Resistance Unbalance	Max 2%	0.5%
Dielectric Strength	1.0kV dc or 0.7kV ac for 1 min	100% in process test
Insulation Resistance	>500MΩ.km @ 100-500 V test voltage	>5 GΩ.km
Capacitance Unbalance to Earth	Max 160 pF/100m	40 pF/100m
Velocity of Propagation	<537.6 nsec/100m @ 100MHz	496 nsec/100m @ 100MHz (NVP for hand held testers = 0.68)
Skew	Max 40 nsec/100m @ 100MHz	25 nsec/100m @ 100MHz
Mean Characteristic Impedance	100 Ω +/- 5 Ω @ 100MHz	100 Ω +/- 3Ω @ 100MHz
Transfer Impedance	Max 100 mΩ/m @ 100 MHz	20 mΩ/m @ 10MHz (ISO 61156 grade 2 cable)
Coupling Attenuation up to 1Ghz	Min 55 dB	80 dB

Frequency (MHz)		1	4	10	16	20	31.25	62.5	100	155	200	250
Insertion Loss (dB / 100m)	Spec	2.1	4.0	6.3	8.0	9.0	11.4	16.5	21.4	na	na	na
	Typical	2.0	3.8	6.0	7.6	8.6	10.8	15.8	20.4	26.1	30.3	34.5
NEXT (dB)	Spec	65.3	56.3	50.3	47.2	45.8	42.9	38.4	35.3	na	na	na
	Typical	73.3	64.3	58.3	55.2	53.8	50.9	46.4	43.3	40.4	38.3	37.3
PSNEXT (dB)	Spec	62.3	53.3	47.3	44.2	42.8	39.9	35.4	32.3	na	na	na
	Typical	70.3	61.3	55.3	52.2	50.8	47.9	43.4	40.3	37.4	35.8	34.3
ELFEXT (dB / 100m)	Spec	63.8	51.8	43.8	39.7	37.8	33.9	27.9	23.8	na	na	na
	Typical	78.8	66.8	58.8	54.7	52.8	48.9	42.9	38.8	35.0	32.8	30.8
PSELFEXT (dB / 100m)	Spec	60.8	48.8	40.8	36.7	34.8	30.9	24.9	20.8	na	na	na
	Typical	76.8	64.8	56.8	52.7	50.8	46.9	40.9	36.8	33.0	30.8	28.8
Return Loss (dB / 100m)	Spec	na	23.0	25.0	25.0	25.0	23.6	21.5	20.1	na	na	na
	Typical	25.0	28.0	30.0	30.0	30.0	28.6	26.5	25.1	23.8	23.0	22.3
ACR (dB / 100m)	Typical	71.3	60.5	52.3	47.6	45.2	40.0	30.6	22.9	14.3	8.5	2.9
PSACR (dB / 100m)	Typical	68.3	57.5	49.3	44.6	42.2	37.0	27.6	19.9	11.3	5.5	-0.1

Product Part Numbering

Part Number	GPS	GPS-D	GPS-HF1	GPS-HF1-D	GPS-HF3	GPS-HF3-D
Outer Sheath	PVC	PVC	LSZH	LSZH	LSZH	LSZH
Construction	Simplex	Duplex	Simplex	Duplex	Simplex	Duplex
Cable Weight	48.9 kg/km	97.8 kg/km	51.0kg/km	102.0 kg/km	58.8 kg/km	117.6 kg/km
Calorific Value	0.14 k Wh/m	0.28 k Wh/m	0.12 k Wh/m	0.24 k Wh/m	0.16 k Wh/m	0.32 k Wh/m
Outer Diameter (nom)	6.1mm	12.2 x 6.1mm	6.1mm	12.2 x 6.1mm	6.7mm	13.4 x 6.7mm
Sheath Colour	Grey RAL 7037	Grey RAL 7037	Violet RAL 4005	Violet RAL 4005	Blue RAL 5015	Blue RAL 5015
Fire Safety Rating	IEC 60332-1-2	IEC 60332-1-2	IEC 60332-1-2	IEC 60332-1-2	IEC 60332-3-24	IEC 60332-3-24
Acid Gas Emissions	na	na	IEC 60754-1	IEC 60754-1	IEC 60754-1	IEC 60754-1
Smoke Index	na	na	IEC 61034	IEC 61034	IEC 61034	IEC 61034
Packaging	WRL	WRL	WRL	WRL	WRL	WRL



Independent 3rd Party Certification (3P)

PRODUCT DESCRIPTION:

GigaPlus SF/UTP 100 Ω 4x2xAWG 24/1 premium grade Class D/Cat5e cable to support Gigabit Ethernet protocol combined with exceptional EMI/RFI protection for installations in horizontal and backbone areas.

PRODUCT PERFORMANCE:

Core

Conductor:	24 AWG Plain Annealed Copper Wire
Insulation:	Polyolefin
Diameter:	1.10mm Nominal
Pair:	2 of the above cores
Pair Colour:	Blue-White, Orange-White Green-White, Brown-White

Final Assembly

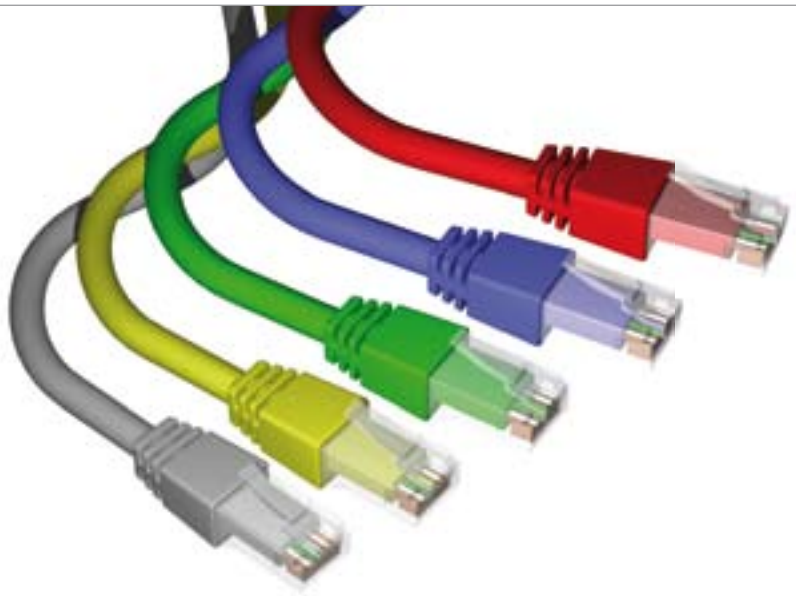
Cable:	4 of the above pairs
Binder:	Wrapped with polyester tape 100% coverage
Tape Screen:	Wrapped with aluminium polyester tape applied metal side out
Braid Screen:	0.127mm Tinned Annealed Copper Wire
Sheath:	PVC or LSZH compound

Mechanical and Environmental

Temp - Installation:	0°c to +50°c
Temp - Operation:	-20°c to +75°c
Max Tensile Load:	10kg per simplex cable (installation)
Min Bend Radius:	8 x Outer Diameter (installation) 4 x Outer Diameter (operation)

Packaging

WRL	500m Wooden Reel 1000m Wooden Reel



Compliant with ISO/IEC 61935-2

Brand-Rex Copper Patch Cords - GigaPlus

Category 5e Patch Cords with Blade Server Boot

THE BRAND-REX 7 POINT PATCH CORD PROMISE

1. GigaPlus patch cords are independently verified by 3P
2. GigaPlus patch cords are manufactured using leading brand Category 5e conformant RJ-45 modular plugs
3. GigaPlus patch cords are manufactured with a flexible strain relief boot as standard.
4. GigaPlus patch cords are tested in accordance with our AQL plan for Category 5e standards conformance
5. GigaPlus patch cords are available in screened and unscreened constructions
6. GigaPlus patch cords carry a no quibble replacement guarantee*
7. GigaPlus patch cords are incorporated within the Brand-Rex warranty programme

* Any Brand-Rex patch cord that fails to meet the specified requirements of Category 5e will be replaced free of charge

PRODUCT DESCRIPTION:

Brand-Rex GigaPlus patch cords enable you to get the optimum performance from your cabling system. Our factory made and tested patch cords offer you guaranteed quality, and ensure that your system avoids the performance degradation that inferior alternatives will give you at high data rates. All patch cords are supplied with boots and ID tag.

Part Number Format

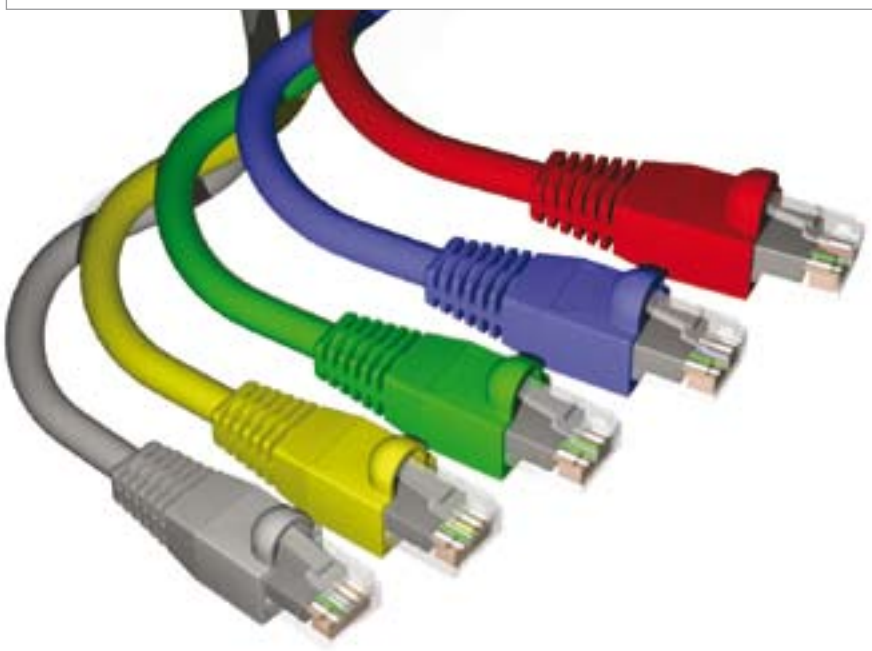
GPC-PC-A-bbb-cde-F

A - Cord Type	bbb - Cord Length	cde - Colour Scheme			F - Speciality Tag
		(c) Cable	(d) Boot 1	(e) Boot 2	
U 24AWG UTP	010 1 metre	1 Red	1 Red	1 Red	S Solid
F 26AWG FTP	020 2 metre	4 Blue	4 Blue	4 Blue	X Crossover
S 26AWG STP	030 3 metre	5 Green	5 Green	5 Green	HB Halogen Free
	050 5 metre	6 Yellow	6 Yellow	6 Yellow	- Standard
	Additional lengths on request	8 Grey	8 Grey	8 Grey	
		Additional colours on request			

Product Part Numbering

	Red	Blue	Green	Yellow	Grey
24 AWG U/UTP - 1.0m	GPCPCU010-111HB	GPCPCU010-444HB	GPCPCU010-555HB	GPCPCU010-666HB	GPCPCU010-888HB
24 AWG U/UTP - 2.0m	GPCPCU020-111HB	GPCPCU020-444HB	GPCPCU020-555HB	GPCPCU020-666HB	GPCPCU020-888HB
24 AWG U/UTP - 3.0m	GPCPCU030-111HB	GPCPCU030-444HB	GPCPCU030-555HB	GPCPCU030-666HB	GPCPCU030-888HB
24 AWG U/UTP - 5.0m	GPCPCU050-111HB	GPCPCU050-444HB	GPCPCU050-555HB	GPCPCU050-666HB	GPCPCU050-888HB
26 AWG F/UTP - 1.0m	GPCPCF010-111HB	GPCPCF010-444HB	GPCPCF010-555HB	GPCPCF010-666HB	GPCPCF010-888HB
26 AWG F/UTP - 2.0m	GPCPCF020-111HB	GPCPCF020-444HB	GPCPCF020-555HB	GPCPCF020-666HB	GPCPCF020-888HB
26 AWG F/UTP - 3.0m	GPCPCF030-111HB	GPCPCF030-444HB	GPCPCF030-555HB	GPCPCF030-666HB	GPCPCF030-888HB
26 AWG F/UTP - 5.0m	GPCPCF050-111HB	GPCPCF050-444HB	GPCPCF050-555HB	GPCPCF050-666HB	GPCPCF050-888HB
26 AWG SF/UTP - 1.0m	GPCPCS010-111HB	GPCPCS010-444HB	GPCPCS010-555HB	GPCPCS010-666HB	GPCPCS010-888HB
26 AWG SF/UTP - 2.0m	GPCPCS020-111HB	GPCPCS020-444HB	GPCPCS020-555HB	GPCPCS020-666HB	GPCPCS020-888HB
26 AWG SF/UTP - 3.0m	GPCPCS030-111HB	GPCPCS030-444HB	GPCPCS030-555HB	GPCPCS030-666HB	GPCPCS030-888HB
26 AWG SF/UTP - 5.0m	GPCPCS050-111HB	GPCPCS050-444HB	GPCPCS050-555HB	GPCPCS050-666HB	GPCPCS050-888HB

Non standard colour and length options are available to order on request.



Compliant with ISO/IEC 61935-2

Brand-Rex Copper Patch Cords - GigaPlus

Category 5e Patch Cords with Standard Boot

Part Number Format

GPC-PC-A-bbb-cde-F

A - Cord Type	bbb - Cord Length	cde - Colour Scheme			F - Speciality Tag
		(c) Cable	(d) Boot 1	(e) Boot 2	
U 24AWG UTP	010 1 metre	1 Red	1 Red	1 Red	S Solid
F 26AWG FTP	020 2 metre	4 Blue	4 Blue	4 Blue	X Crossover
S 26AWG STP	030 3 metre	5 Green	5 Green	5 Green	H Halogen Free
	050 5 metre	6 Yellow	6 Yellow	6 Yellow	- Standard
	Additional lengths on request	8 Grey	8 Grey	8 Grey	
		Additional colours on request			

THE BRAND-REX 7 POINT PATCH CORD PROMISE

1. GigaPlus patch cords are independently verified by 3P
2. GigaPlus patch cords are manufactured using leading brand Category 5e conformant RJ-45 modular plugs
3. GigaPlus patch cords are manufactured with a flexible strain relief boot as standard
4. GigaPlus patch cords are tested in accordance with our AQL plan for Category 5e standards conformance
5. GigaPlus patch cords are available in screened and unscreened constructions
6. GigaPlus patch cords carry a no quibble replacement guarantee*
7. GigaPlus patch cords are incorporated within the Brand-Rex warranty programme

* Any Brand-Rex patch cord that fails to meet the specified requirements of Category 5e will be replaced free of charge

PRODUCT DESCRIPTION:

Brand-Rex GigaPlus patch cords enable you to get the optimum performance from your cabling system. Our factory made and tested patch cords offer you guaranteed quality, and ensure that your system avoids the performance degradation that inferior alternatives will give you at high data rates. All patch cords are supplied with boots and ID tag.

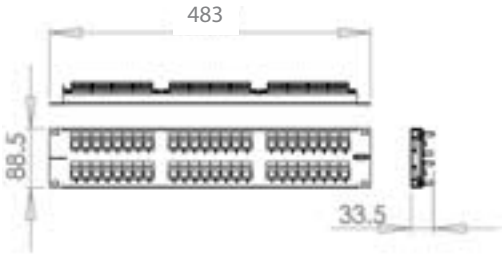
Product Part Numbering

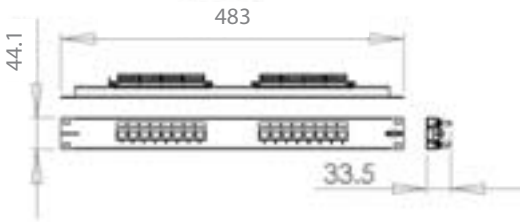
	Red	Blue	Green	Yellow	Grey
24 AWG U/UTP - 1.0m	GPCPCU010-111H	GPCPCU010-444H	GPCPCU010-555H	GPCPCU010-666H	GPCPCU010-888H
24 AWG U/UTP - 2.0m	GPCPCU020-111H	GPCPCU020-444H	GPCPCU020-555H	GPCPCU020-666H	GPCPCU020-888H
24 AWG U/UTP - 3.0m	GPCPCU030-111H	GPCPCU030-444H	GPCPCU030-555H	GPCPCU030-666H	GPCPCU030-888H
24 AWG U/UTP - 5.0m	GPCPCU050-111H	GPCPCU050-444H	GPCPCU050-555H	GPCPCU050-666H	GPCPCU050-888H
26 AWG F/UTP - 1.0m	GPCPCF010-111H	GPCPCF010-444H	GPCPCF010-555H	GPCPCF010-666H	GPCPCF010-888H
26 AWG F/UTP - 2.0m	GPCPCF020-111H	GPCPCF020-444H	GPCPCF020-555H	GPCPCF020-666H	GPCPCF020-888H
26 AWG F/UTP - 3.0m	GPCPCF030-111H	GPCPCF030-444H	GPCPCF030-555H	GPCPCF030-666H	GPCPCF030-888H
26 AWG F/UTP - 5.0m	GPCPCF050-111H	GPCPCF050-444H	GPCPCF050-555H	GPCPCF050-666H	GPCPCF050-888H
26 AWG SF/UTP - 1.0m	GPCPCS010-111H	GPCPCS010-444H	GPCPCS010-555H	GPCPCS010-666H	GPCPCS010-888H
26 AWG SF/UTP - 2.0m	GPCPCS020-111H	GPCPCS020-444H	GPCPCS020-555H	GPCPCS020-666H	GPCPCS020-888H
26 AWG SF/UTP - 3.0m	GPCPCS030-111H	GPCPCS030-444H	GPCPCS030-555H	GPCPCS030-666H	GPCPCS030-888H
26 AWG SF/UTP - 5.0m	GPCPCS050-111H	GPCPCS050-444H	GPCPCS050-555H	GPCPCS050-666H	GPCPCS050-888H

Non standard colour and length options are available to order on request.

Brand-Rex Copper Connectivity - GigaPlus Panels

Category 5e Panel - Unshielded





PRODUCT DESCRIPTION:

The GigaPlus 19" rack mounted patch panel offers true Category 5e component performance using patented state of the art printed circuit technology. All outlets are numerically identified with an additional writable surface for ease of port naming. Each panel is supplied with cable ties, panel mounting accessories and short form installation instructions.

PRODUCT CHARACTERISTICS:

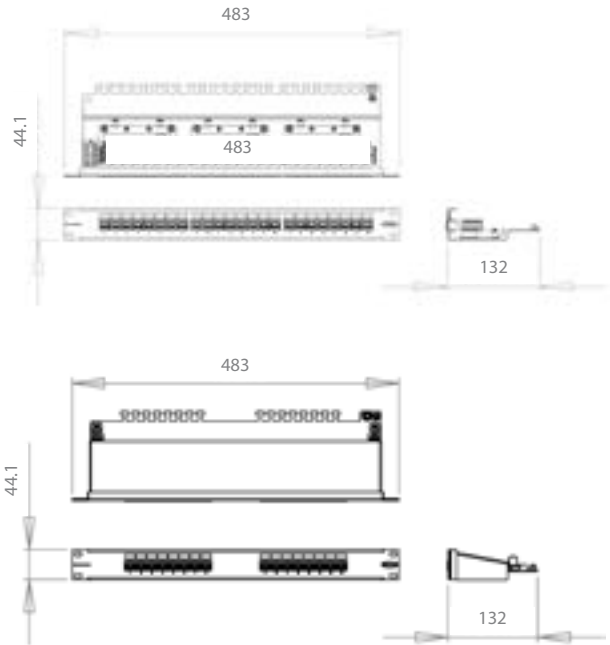
Panel Width:	19" (483mm)
Panel Height:	16 & 24 port 1U (44.1mm)
	32 & 48 port 2U (88.5mm)
Panel Depth:	33.50mm
Outlet Style:	Unkeyed RJ-45
Colour:	RAL 9005 Black
	or RAL 7035 Grey
Punch Down Blocks:	Universal style IDC
Wiring Standard:	EIA/TIA 568A/B
Conformance:	ISO/IEC 11801 : 2002
	ANSI/TIA/EIA 568B.2 : 2002
	EN50173-1 : 2002

Product Part Numbering

	16 Port	24 Port	32 Port	48 Port
Universal IDC - Black	GPCPNLU16002	GPCPNLU24002	GPCPNLU32002	GPCPNLU48002
Universal IDC - Grey	GPCPNLU16008	GPCPNLU24008	GPCPNLU32008	GPCPNLU48008

Brand-Rex Copper Connectivity - GigaPlus Panels

Category 5e Panel - with Cable Management



PRODUCT DESCRIPTION:

The GigaPlus 19" rack mounted patch panel offers true Category 5 component performance using patented state of the art printed circuit technology.

Available in 16 and 24 port versions, these panels have a cable management / strain relief feature built into the rear mounted grounding bar. All outlets are numerically identified with an additional writable surface for ease of port naming. Each panel is supplied with cable ties, panel mounting accessories and short form installation instructions.

PRODUCT CHARACTERISTICS:

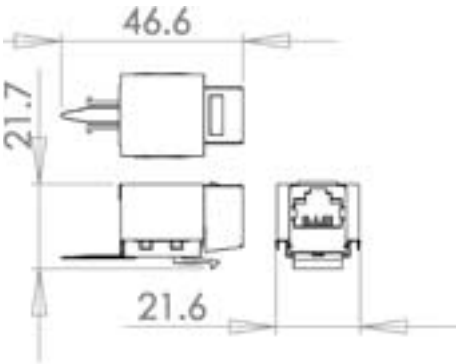
Panel Width:	19" (483mm)
Panel Height:	1U (44.1mm)
Panel Depth:	132.0mm
Outlet Style:	Unkeyed RJ-45
Outlets:	16 or 24 ports
Colour:	RAL 9005 Black or RAL 7035 Grey
Punch Down Blocks:	LSA or 110 style IDC
Wiring Standard:	EIA/TIA 568A/B
Conformance:	ISO/IEC 11801 : 2002 ANSI/TIA/EIA 568B.2 : 2002 EN50173-1 : 2002

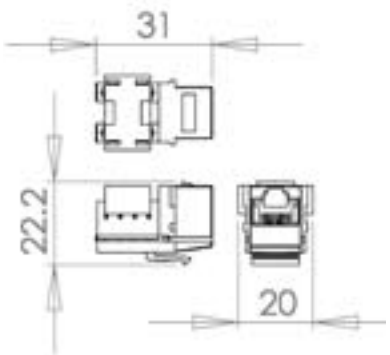
Product Part Numbering

	16 Port	24 Port
Unshielded Panel LSA Style - Black	GPCPNLU160K2M	GPCPNLU240K2M
Unshielded Panel LSA Style - Grey	GPCPNLU160K8M	GPCPNLU240K8M
Unshielded Panel 110 Style - Black	GPCPNLU16012M	GPCPNLU24012M
Unshielded Panel 110 Style - Grey	GPCPNLU16018M	GPCPNLU24018M
Shielded Panel LSA Style - Black	GPCPNLF160K2M	GPCPNLF240K2M
Shielded Panel LSA Style - Grey	GPCPNLF160K8M	GPCPNLF240K8M
Shielded Panel 110 Style - Black	GPCPNLF16012M	GPCPNLF24012M
Shielded Panel 110 Style - Grey	GPCPNLF16018M	GPCPNLF24018M

Brand-Rex Copper Connectivity - GigaPlus Jacks

Category 5e Snap-In Lead Frame Jacks - Shielded and Unshielded





PRODUCT DESCRIPTION:

GigaPlus Shielded and Unshielded Snap-In-Jacks offer true Category 5e component performance. The jack is backward compatible and also fully compatible with all our UK and Continental style faceplates and products. Each jack is supplied with a short form installation instruction and stuffer cap.

PRODUCT CHARACTERISTICS:

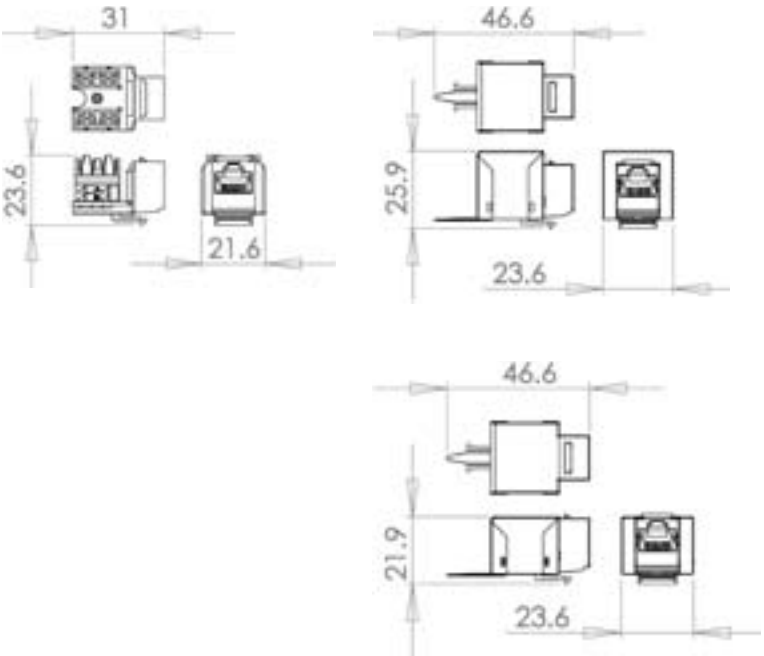
Outlet Style:	Shielded / Unshielded Keystone type with unkeyed RJ-45 ports
Cable Entry:	Top and Rear
Hole Plate Thickness:	1.60mm max
Body Material:	Impact modified PPO UL94 - V0 rated
Jack Contacts:	Phosphor Bronze
Plating:	50 µm gold over 100 µm nickel
Punch Down Blocks:	110 style IDC
IDC Contacts:	Phosphor Bronze
Wiring Standard:	EIA/TIA 568A/B
Conformance:	ISO/IEC 11801 : 2002 ANSI/TIA/EIA 568B.2 : 2002 EN50173-1 : 2002

Product Part Numbering

	Unshielded	Shielded
110 Style	GPCJAKU013LF	GPCJAKF013LF

Brand-Rex Copper Connectivity - GigaPlus Jacks

Category 5e Snap-In-Jacks - Shielded and Unshielded



PRODUCT DESCRIPTION:

GigaPlus Shielded and Unshielded Snap-In-Jacks offer true Category 5e component performance. The jacks are backward compatible and also fully compatible with all our UK and Continental style faceplates and products. Each jack is supplied with a short form installation instruction and cable tie.

PRODUCT CHARACTERISTICS:

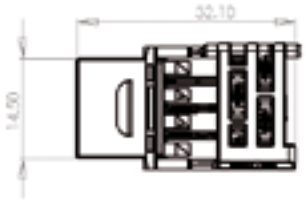
Outlet Style:	Shielded / Unshielded Keystone type with unkeyed RJ-45 ports
Cable Entry:	Top and Rear
Hole Plate Thickness:	1.60mm max
Body Material:	Impact modified PBT UL94 - V0 rated
Jack Contacts:	Phosphor Bronze
Plating:	50 µm gold over 100 µm nickel
Punch Down Blocks:	110 or LSA style IDC
IDC Contacts:	Phosphor Bronze
Wiring Standard:	EIA/TIA 568A/B
Conformance:	ISO/IEC 11801 : 2002 ANSI/TIA/EIA 568B.2 : 2002 EN50173-1 : 2002

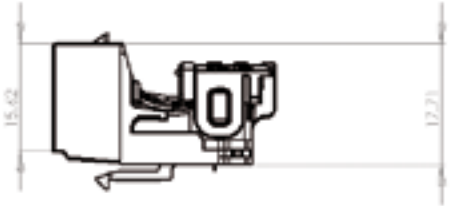
Product Part Numbering

	Unshielded	Shielded
LSA Style - Black	GPCJAKU0K2	GPCJAKF0K2
LSA Style - White	GPCJAKU0K3	-
110 Style - Black	GPCJAKU012	GPCJAKF012
110 Style - White	GPCJAKU013	-

Other colours available on request.

Brand-Rex Copper Connectivity - GigaPlus Jacks
Category 5e Tool-free Jack





PRODUCT DESCRIPTION:
The Tool-free Jack offers true Cat5e performance and is fully compatible with Brand-Rex UK and continental UNI style faceplates and products. The jacks come supplied in boxes of 12; termination instructions are on the rear of the box. No termination tool is required. Each jack has integral colour code wiring labels.

PRODUCT CHARACTERISTICS:

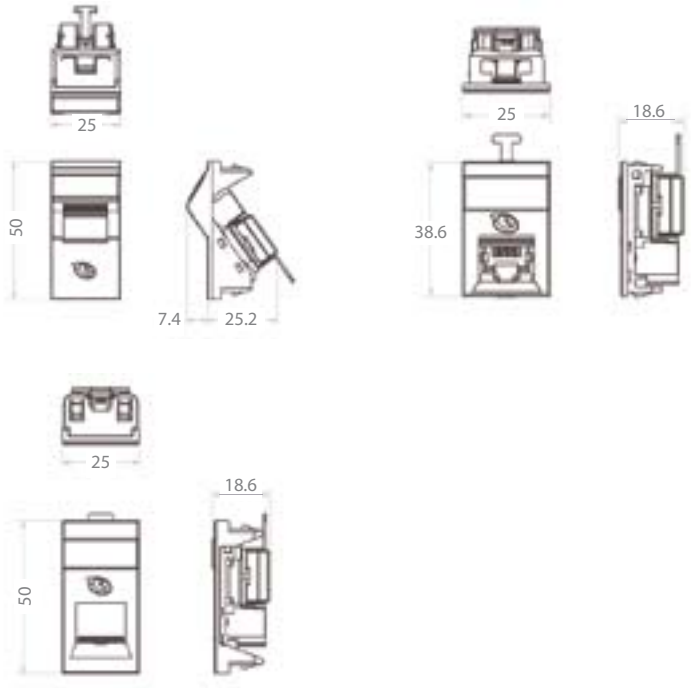
Outlet Style:	Unshielded with un-keyed RJ-45 port
Cable Entry:	Rear, top and bottom
Colour:	Black translucent
Body Materials:	UL94 – V0
Jack Contacts:	Phosphor bronze, Plating 50 µm gold over 100 µm of nickel
Termination Block Material:	UL94-V0
IDC Contacts:	Titanium copper, tin plated
Wiring Standard:	EIA/TIA 568 A & B
Conformance:	IS11801 : 2002 EN50173-I : 2002 TIA568B.2

Product Part Numbering

Description	Product Part Number
Category 5e Tool-free Jack	GPCJAKU002

Brand-Rex Copper Connectivity - GigaPlus Modules

Category 5e Slimline Shuttered Modules - Shielded and Unshielded



Product Part Numbering

	Unshielded	Shielded
50mm x 25mm Slimline Shuttered Module - White	GPCSL062UB03	GPCSL062SB03
50mm x 25mm Slimline Shuttered Module - Black	GPCSL062UB02	GPCSL062SB02
38mm x 25mm Slimline Shuttered Module - White	GPCSL06CUB03	GPCSL06CSB03
38mm x 25mm Slimline Shuttered Module - Black	GPCSL06CUB02	GPCSL06CSB02
50mm x 25mm Angled Slimline Shuttered Module - White	GPCSLA62UB03	GPCSLA62SB03
50mm x 25mm Angled Slimline Shuttered Module - Black	GPCSLA62UB02	GPCSLA62SB02

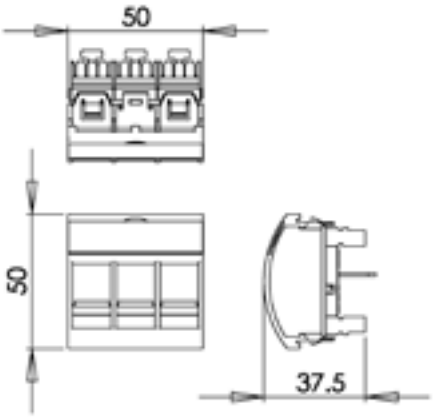
PRODUCT DESCRIPTION:

GigaPlus Slimline Shuttered Modules offer true Category 5e component performance and are fully compatible with Brand-Rex UK and continental UNI style faceplates and products, and are suitable for applications where internal back box space is limited. Each jack is supplied with a shortform installation instruction and a cable tie to attach the cable to the cable anchor. Modules are supplied with a colour code wiring label.

PRODUCT CHARACTERISTICS:

Outlet Style:	Shielded / Unshielded Keystone type with unkeyed RJ-45 ports
Cable Entry:	Rear and Top
Colour:	Black or White
Body Material:	High impact ABS UL94 - VO
Jack Contacts:	Phosphor Bronze
Plating:	50 µm Gold over 100 µm of nickel
Punch Down Blocks:	Universal IDC
IDC Contacts:	Phosphor Bronze
Wiring Standard:	EIA/TIA 568B
Conformance:	ISO/IEC 11801 : 2002, ANSI/EIA/TIA 568B.2 : 2002 EN50173-1 : 2002

Brand-Rex Copper Connectivity - GigaPlus Outlets
Category 5e Triple Shuttered Outlet



PRODUCT DESCRIPTION:
The Brand-Rex GigaPlus Unshielded Triple Outlet offers a high density outlet solution with true Category 5e component performance. The outlet is backward compatible with our UK and continental UNI style faceplates providing a 3 or 6 RJ-45 solution for high density outlet installations.

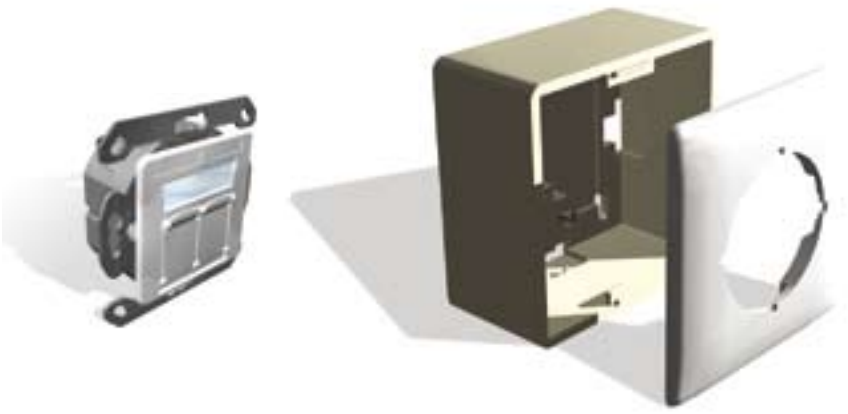
Each outlet is fitted with a removable label protector with individual rear cable anchors and colour wiring detail. Every outlet is supplied in an easy tear pack with a shortform installation instruction, paper label and cable ties.

PRODUCT CHARACTERISTICS:

Outlet Style:	Unkeyed RJ-45
Faceplate Style:	UK / Continental UNI style compatible
Backbox:	Minimum 32mm depth
Colour:	RAL 9010 White
Body Material:	ABS
Jack Contacts:	Phosphor Bronze
Plating:	50µm gold over 100µ nickel
Punch Down Blocks:	Universal 110/LSA Style IDC
Wiring Standard:	EIA/TIA 568A/B
Conformance:	Category 5e ANSI/EIA/TIA 568B.2:2002 ISO/IEC 11801:2002 EN50173-1:2002

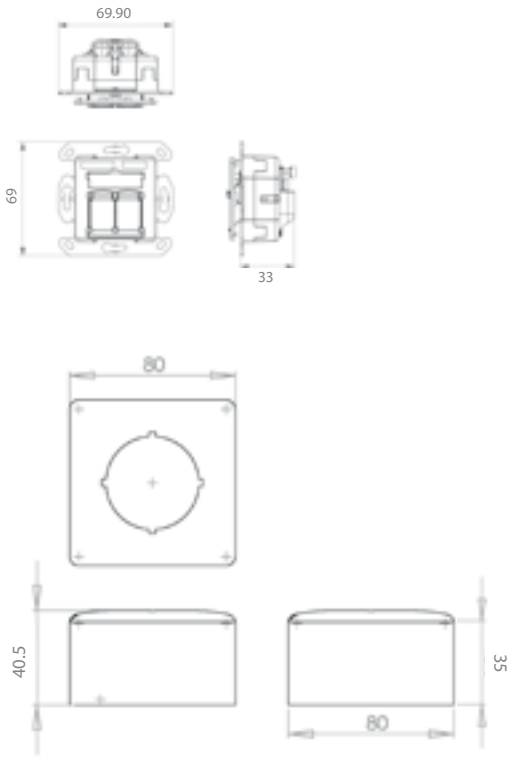
Product Part Numbering

	Unshielded
Triple Shuttered Module - White	GPCTWOU003



Brand-Rex Copper Connectivity - GigaPlus Outlets

Category 5e European Style Outlet



PRODUCT DESCRIPTION:

The Brand-Rex combined shielded outlet and RJ-45 socket has the same true Category 5e performance as our GigaPlus panels. Primarily designed for mounting into duct or trunking using a 45mm diameter hole, the outlet can be either flush or wall mounted by using the 80 x 80mm continental styled faceplate and 33mm back box.

PRODUCT CHARACTERISTICS:

Outlet Style:	Shielded Keystone type with unkeyed RJ-45 ports
Cable Entry:	Horizontal or Vertical
Colour:	RAL 1013 Ivory or RAL 9010 White
Body Material:	High impact PPO UL94 - VO
Jack Contacts:	Phosphor Bronze
Plating:	50 µm gold over 100 µm of nickel
Punch Down Blocks:	LSA style IDC
IDC Contacts:	Phosphor Bronze
Wiring Standard:	EIA/TIA 568A/B
Conformance:	ISO/IEC 11801 : 2002 ANSI/TIA/EIA 568B.2 : 2002 EN50173-1 : 2002
Approval:	Product is approved by GHMT

Product Part Numbering

	White	Ivory
2 Way Shielded Outlet	GPCG245SU002	GPCG245SU001
80 x 80 Faceplate and Back Box	MMCWDOSMA002	MMCWDOSMA001

Brand-Rex Copper Connectivity - GigaPlus Cross Connect
Category 5e Cross Connect Tower Units

PRODUCT DESCRIPTION:
The tower mount frame provides a modular, high density, cross connect and cable management system. The base tower is supplied as a 300 pair unit but the capacity can be increased using additional extension frames. Tower units are supplied with wiring bases and connector blocks for 300 pair.

PRODUCT CHARACTERISTICS:
Material: Mild steel,
Black powder coated
Dimensions:
300 pair mounting frame
546.1 x 215.9 x 235.0mm

300 pair extension mounting frame
416.0 x 215.9 x 88.9mm

Vertical cable organiser
546.1 x 215.9 x 235.0mm

Vertical cable organiser extension
426.5 x 215.9 x 228.6mm

Product Part Numbering

Cat5e 110 Tower, 300 pair mounting frame	GPC110TWR300P
Cat5e 110 Tower, 300 pair extension mounting frame	GPC110TWR300PE

Brand-Rex Copper Connectivity - GigaPlus Cross Connect
Category 5e Cross Connect Patch Cord

PRODUCT DESCRIPTION:
Cross Connect patchcords are available in 110 to 110 style or 110 to RJ45 style. The standard Category 5e 110 connector can be supplied as a 4 pair or 1 pair version.

PRODUCT CHARACTERISTICS:

Conformance:	Category 5e ANSI/EIA/TIA 568B.2
Cord type:	Grey 24AWG UTP
Dimensions:	50.2 x 30.9 x 9.0mm (4 pair) 57.5 x 7.4 x 9.0mm (1 pair)
Temperature Range:	0 to 50 °C (installation) -20 to 75 °C (operational)

Product Part Numbering

	110 – 110 1 Pair	110 – 110 4 Pair	110 – RJ45
Cross Connect Patch Cord - 1.0m	GPC110110PC010-1	GPC110110PC010-4	GPC110RJ4PC010
Cross Connect Patch Cord - 1.5m	GPC110110PC015-1	GPC110110PC015-4	GPC110RJ4PC015
Cross Connect Patch Cord - 2.0m	GPC110110PC020 -1	GPC110110PC020-4	GPC110RJ4PC020
Cross Connect Patch Cord - 3.0m	GPC110110PC030-1	GPC110110PC030-4	GPC110RJ4PC030
Cross Connect Patch Cord - 4.0m	GPC110110PC040-1	GPC110110PC040-4	GPC110RJ4PC040
Cross Connect Patch Cord - 5.0m	GPC110110PC050 -1	GPC110110PC050-4	GPC110RJ4PC050

Brand-Rex Copper Connectivity - GigaPlus Cross Connect

Category 5e Cross Connect Wiring Bases and Connector

Product Part Numbering

Category 5e 110 wiring base 50 pair with legs	GPC110WB50PL
Category 5e 110 wiring base 50 pair without legs	GPC110WB50P
Category 5e 110 wiring base 50 pair with legs, Kit	GPC110WB50PLK
Category 5e 110 wiring base 50 pair without legs, Kit	GPC110WB50PK
Category 5e 110 wiring base 100 pair with legs	GPC110WB100PL
Category 5e 110 wiring base 100 pair without legs	GPC110WB100P
Category 5e 110 wiring base 100 pair with legs, Kit	GPC110WB100PLK
Category 5e 110 wiring base 100 pair without legs, Kit	GPC110WB100PK
Category 5e 110 wiring base 300 pair with legs	GPC110WB300PL
Category 5e 110 wiring base 300 pair without legs	GPC110WB300P
Category 5e 110 wiring base 300 pair with legs, Kit	GPC110WB300PLK
Category 5e 110 wiring base 300 pair without legs, Kit	GPC110WB300PK
Category 5e 110 wiring base 100 pair rack mounted, Kit	GPC110WB100PRK
Category 5e 110 wiring base 200 pair rack mounted, Kit	GPC110WB200PRK
Category 5e 110 wiring base 300 pair rack mounted, Kit	GPC110WB300PRK
Category 5e 110 Connector Block – 4 Pair	GPC110CB4P
Category 5e 110 Connector Block – 5 Pair	GPC110CB5P

PRODUCT DESCRIPTION:

Wiring Base

The Category 5e 110-wiring base can be supplied as a 50, 100 or 300 pair version, with or without legs. It can also be supplied rack mounted as a 100, 200 or 300 pair version. Designation labels are included with the bases.

50 Pair Wiring Base Kits

A typical kit for a 50 pair wiring base includes a basic wiring base and 12 off 4 pair connector blocks. A typical kit for a rack mounted 100 pair wiring base includes 2 off 50 pair wiring base, 25 off 4 pair connector blocks and 5 off 5 pair connector blocks.

Connector Block

The connector can be supplied as a 4 or 5 pair version and is specifically designed to exceed Category 5e performance. It has a robust design and is colour coded for easy identification. The connector is supplied in bags of 10.

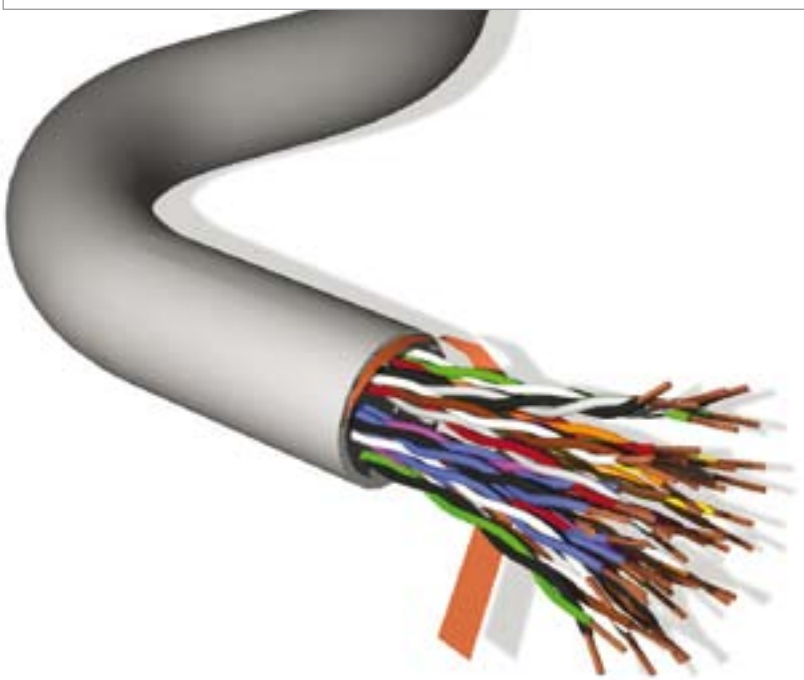
PRODUCT CHARACTERISTICS:

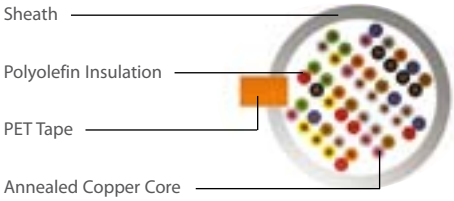
Conformance:	Category 5e ANSI/EIA/TIA 568B.2
Connector Block	
Material:	Flame retardent thermoplastic rated UL94V-0, off-white
Wiring Base	
Material:	Flame retardent thermoplastic rated UL94V-0, off-white
Contact Material:	Copper Alloy, tin plated

BRAND-REX VOICE SYSTEM (CATEGORY 3 - CLASS C):

The Brand-Rex Voice System is a comprehensive system of high quality Voice products forming part of the Brand-Rex range and is therefore backed by a 25 year system warranty for total peace of mind

- Compact 1U 25 and 50 port voice panels that give maximum configurable connections at both front and rear
- Category 3 voice cable for higher performance voice links
- Network termination boxes (30 pair, 50 pair & 100 pair) plus 10 pair disconnection strips
- A full range of accessories providing total installed voice solutions





Brand-Rex Copper Cables - VOICE
24 AWG U/UTP MultiPair Sheathed Cable

Table 1: Pair Colour Code

Pair Number	Colour - Conductor 1	Colour - Conductor 2
1	White	Blue
2	White	Orange
3	White	Green
4	White	Brown
5	White	Grey
6	Red	Blue
7	Red	Orange
8	Red	Green
9	Red	Brown
10	Red	Grey
11	Black	Blue
12	Black	Orange
13	Black	Green
14	Black	Brown
15	Black	Grey
16	Yellow	Blue
17	Yellow	Orange
18	Yellow	Green
19	Yellow	Brown
20	Yellow	Grey
21	Violet	Blue
22	Violet	Orange
23	Violet	Green
24	Violet	Brown
25	Violet	Grey

Table 2: Unit Binder Colour Code

Unit Number	Binding Colour	Pair Number (25 pair units)
1	Blue-White	1-25
2	Orange-White	26-50
3	Green-White	51-75
4	Brown-White	76-100
5	Grey-White	101-125
6	Blue-Red	126-150
7	Orange-Red	151-175
8	Green-Red	176-200

Product Part Numbering

Part Number	25 Pair	50 Pair	100 Pair
Part Number	C3U25PRHF1	C3U50PRHF1	C3U100PRHF1
Outer Sheath	LSZH	LSZH	LSZH
Cable Weight	155 kg/km	290 kg/km	550 kg/km
Outer Diameter (nom)	9.50mm	13.0mm	18.0mm
Sheath Colour	Grey RAL 7035	Grey RAL 7035	Grey RAL 7035
Fire Safety Rating	IEC 60332-1	IEC 60332-1	IEC 60332-1

PRODUCT DESCRIPTION:
Brand-Rex VOICE cables consist of 0.51mm Polyolefin insulated conductors formed into one or more units of twisted pairs. The units are identified with coloured binders and are assembled to form the cable core. The core may be protected with one or more layers of dielectric material and is covered by a protective LSZH sheath.

PRODUCT CHARACTERISTICS:

Core:

Conductor:	Annealed copper, 0.51mm Diameter
Insulation:	Polyolefin
Cabling Element:	Twisted Pair
Colour Code:	See Table 1 opposite

Final Assembly:

Core Stranding:	25 pair units Unit Binders (see Table 2)
Binder:	Wrapped with polyester tape, 100% coverage
Sheath:	LSZH compound

ELECTRICAL CHARACTERISTICS (@ 20°C):

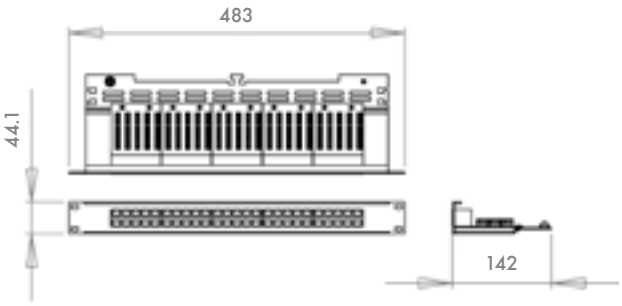
Conductor Resistance:		Max 9.38 Ωs / 100m
Max. Attenuation:	1 MHz	2.6 dB / 100m
	4 MHz	5.6 dB / 100m
	8 MHz	8.5 dB / 100m
	10 MHz	9.7 dB / 100m
	16 MHz	13.1 dB/ 100m
Mutual Capacitance:		6.6 nF / 100m 1KHz
Capacitance Unbalance:		330 pF / 100m KHz
Characteristic Impedance:		100+/- 15 Ωs

NEXT (Max dB Power Sum in 25 pair units):

1 MHz	41 dB
4 MHz	32 dB
8 MHz	27 dB
10 MHz	26 dB
16 MHz	23 dB

Conformance: Category 3
ANSI/EIA/TIA 568B.2 : 2002

Brand-Rex Copper Connectivity - VOICE
Unshielded Panels



PRODUCT DESCRIPTION:
The 19" rack mounted patch panel is available in 25 and 50 port versions, both have a slimline 1U footprint suitable for compact installations maximising rack space. These panels are supplied with cable ties, earth lead, cable manager, mounting bolts and short form instructions.

The rear of the panel offers a choice of between 60 and 150 voice pairs to suit a variety of PBX (Private Branch eXchange) systems and direct line connections.

This offers maximum flexibility for connection to both future and existing PBX installations.

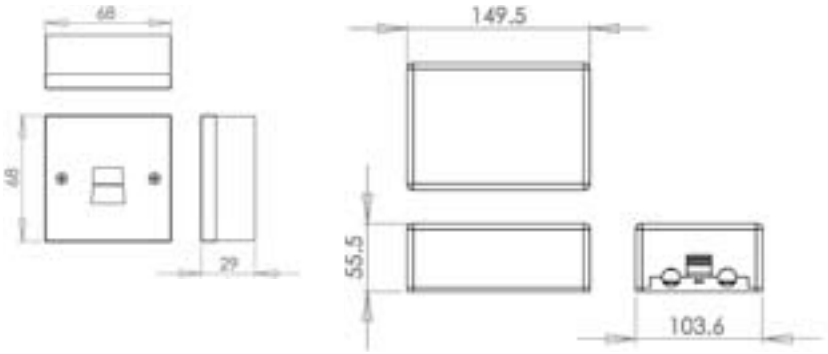
PRODUCT CHARACTERISTICS:

Panel Width:	19" (483mm)
Panel Height	1U (44.45mm)
Panel Depth:	142.0mm
Outlet Style:	Unkeyed RJ45
Outlets:	4 pin or 6 pin
Colour:	RAL 9005 Black or RAL 7035 Grey
Punch Down Blocks:	LSA style IDC
Conformance:	Category 3 ANSI/EIA/TIA 568B.2 : 2002

Product Part Numbering

	25 Port	50 Port
4 Pin - Black	C5CPNLU254PK2	C5CPNLU504PK2
4 Pin - Grey	C5CPNLU254PK8	C5CPNLU504PK8
6 Pin - Black	CPCPNLU256PK2	CPCPNLU506PK2

Brand-Rex Copper Systems - VOICE Connectivity



Product Part Numbering

	White
Wall Mount Dist Box - 3 Block (150 x 104 x 55)	MMCWDBU03001
Wall Mount Dist Box - 5 Block (129 x 160 x 90)	MMCWDBU05001
Wall Mount Dist Box - 10 Block (318 x 209 x 122)	MMCWDBU10001
Disconnection Block - 10 Pair	MMCDISU10PK001
10 Pair Disconnect Block Label Holder	MMCLBL10PU001
PSTN Master Single Outlet LJU Surface Mount	MMCLJUWMPSTN001
PBX Master Single Outlet LJU Surface Mount	MMCLJUWMPABX001
Secondary Single Outlet LJU Surface Mount	MMCLJUWMSEC001
PSTN 25 x 50mm LJU	LJUPSTN001
PBX 25 x 50mm LJU	LJUPBX001
Secondary 25 x 50mm LJU	LJUSEC001
PSTN Fly Lead Adaptor	LAUPSTNMSP001
PBX Fly Lead Adaptor	LAUPBXM001
Secondary Fly Lead Adaptor	LAUSEC001

Not all parts are shown

PRODUCT DESCRIPTION:
Brand-Rex VOICE includes a range of surface mounted telecom boxes for multipair cable termination, surface mounted outlets, 50 x 25mm UK styled faceplate modules and line adaptor fly leads.

Termination Boxes
The range of termination boxes is available in a number of sizes to accommodate up to 10 x 10 pair disconnect termination modules. Each box has been designed for easy access with internal pair management and knockout cable entry to provide a simple cost effective solution for termination of incoming voice lines.

These units can be fitted before and after a PBX (Private Branch eXchange) telephone system providing for the removal or replacement of the PBX unit with minimal disruption to incoming and outgoing connections.

Telecom Outlet (LJU)
Available in PSTN, PBX or secondary units, this product has a UK style telephone socket and LSA style IDC cable termination. Supplied as a standard UK style 68 x 68mm faceplate, this outlet comes with a removable 21mm deep backbox, faceplate mounting screws and installation instructions.

25 x 50mm Telecom Faceplate Module
As with our standard telecom outlet, this product is also available in PSTN, PBX or secondary units, with the same UK style telephone socket and LSA style IDC cable termination. This unit has been designed to mount in the Brand-Rex modular range of faceplates.

Telecom Fly Lead Adaptor
PSTN, PBX or secondary units are available with 150 mm leads to convert an RJ-45 data outlet into a standard UK style telephone outlet.

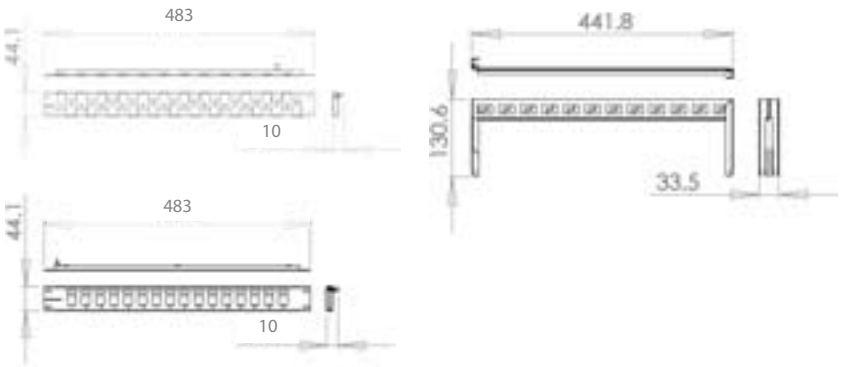
RANGE CHARACTERISTICS:

Telephone Outlet:	UK style 601 (6 pin) with a right hand latch position
Punchdown:	LSA style IDC

BRAND-REX COPPER SYSTEMS ACCESSORIES:

- A comprehensive range of structured cabling system accessories to complement any Brand-Rex structured cabling system

Brand-Rex Copper Connectivity - Snap-In-Jack Modular Panels



PRODUCT DESCRIPTION:
The Brand-Rex 19" Modular Panel is a rack mounted Snap-In-Jack panel that has been designed with a double skin to provide flush mounted jacks. The rear of the panel has been plated for grounding to the chassis on shielded systems. All outlets are numerically identified with an additional writable surface for ease of port naming.

PRODUCT CHARACTERISTICS:

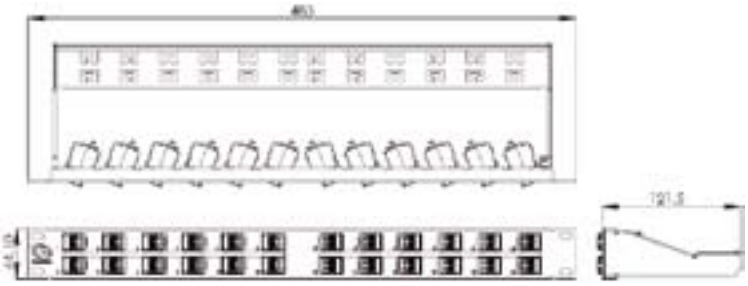
Panel Width:	19" (483mm)
Panel Height:	16 and 24 port 1U (44.1mm) 32 port 2U (88.5mm) 48 port 3U (133.2mm)
Panel Depth:	44.0mm (including jacks)
Panel Depth:	135.0mm (including management)
Colour:	RAL 9005 Black or RAL 7035 Grey
Application:	Suitable for both shielded and unshielded applications when used in conjunction with Brand-Rex approved Snap-In-Jacks. It is recommended that a minimum of one cable manager is used per 1U of modular panel

Product Part Numbering

	16 Port	24 Port	32 Port	48 Port
Modular Snap In Jack Panel - Black	MMCPNLX16SIJ2	MMCPNLX24SIJ2	MMCPNLX32SIJ2	MMCPNLX48SIJ2
Modular Snap In Jack Panel - Grey	MMCPNLX16SIJ8	MMCPNLX24SIJ8	MMCPNLX32SIJ8	MMCPNLX48SIJ8
Modular Panel Cable Manager - Black	MMCACCCMSIJ2			
Modular Panel Cable Manager - Grey	MMCACCCMSIJ8			

Note: Panels supplied empty, Snap-In-Jacks must be purchased separately.

Brand-Rex Copper Connectivity - Snap-In-Jack Angled Panel



PRODUCT DESCRIPTION:

The Brand-Rex Angled Snap-in-Jack Patch Panel is a 1U 24 Port Panel that facilitates cord routing directly into the rack vertical side management thus rendering horizontal cable managers redundant. The resultant increased rack density not only saves valuable space but also offers a panel that eases bending stresses on the cord while maximising performance. The design accommodates a separate rear cable manager to provide a strain relief feature for the simple routing of horizontal cabling and also allows for colour coded labelling.

PRODUCT CHARACTERISTICS:

Applications:	Equipment racks Cabinets
Installation:	Suitable for approved Brand–Rex Snap-In-Jacks (See compatible System Products below)

MECHANICAL SPECIFICATIONS:

Dimensions:	483mm × 44.1mm (1U) × 121.5mm * (w×h×d) [*With Manager assembled]
Clip in Hole Dimensions:	15mm × 20mm (w×h)
Material Data:	Panel and cable manager manufactured from high quality 1.5mm powder coated steel RAL 9005 Black

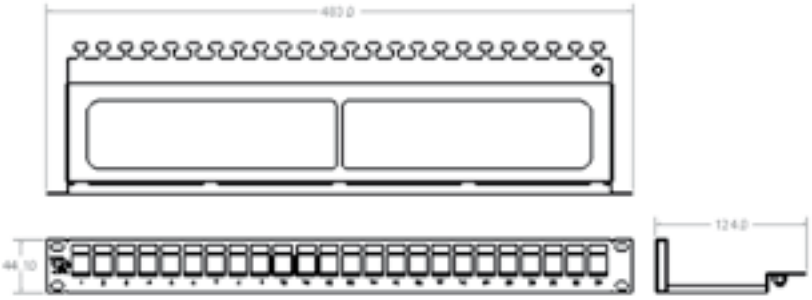
Product Part Numbering

Description	Product Part Number
Angled Snap-In-Jack Panel / Cable Manager Assembly	MMCPNLX24SIJ2MAN

Compatible System Products

Description	Catalogue Number	Colour	Quantity per Pack
Augmented Category 6 Shielded Jack	AC6JAKS000CR	-	12
Augmented Category 6 Unshielded Jack (Tool-free)	AC6JAKU002	Black	12
Category 6 Unshielded Jack (Tool-free)	C6CJAKU002	Black	12
Category 6 Shielded Jack	C6CJAKS000CR	-	12
Category 5 Unshielded Jack (Tool-free)	GPCJAKU002	Black	12
Category 5 Unshielded Jack	GPCJAKU012LF	Black	50
Category 5 Unshielded Jack	GPCJAKU013LF	White	50

Brand-Rex Copper Connectivity - 24 Port Inline Snap-in-Jack Panels



PRODUCT DESCRIPTION:

The 19" inline Snap-in-Jack Patch Panel accommodates 24 ports within a 1U configuration and is compatible with all standard 19" racks and cabinets. All outlets are numerically identified with an additional writable surface allowing for ease of port naming. In addition to this, each panel has been designed with a cable management/ strain relief feature built into the rear.

Each panel is supplied with cable ties, panel mounting accessories and short form installation instructions.

PRODUCT CHARACTERISTICS:

Panel Width:	19" (483mm)
Panel Height:	1U (44.45mm)
Panel Depth:	124mm
Clip in hole dimensions:	15mm x 20mm (w x h)
Outlet Style:	chart below
Outlets:	Up to 24 ports
Colour:	RAL 9005 Black

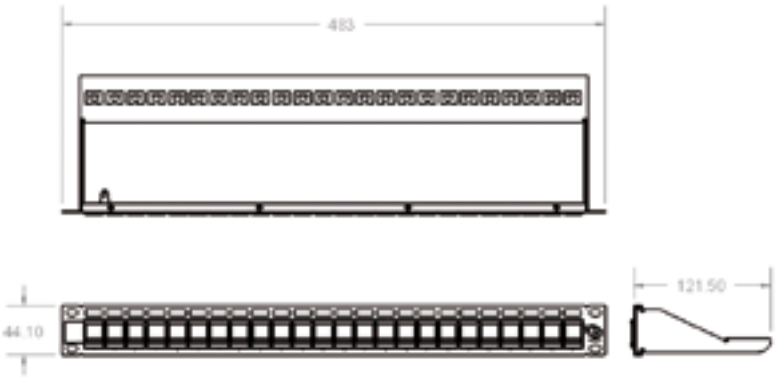
Product Part Numbering

Description	Product Part Number	Colour
24 Port Inline Snap-in-Jack Panel	MMCPNLX24SIJ2MIL	Black
24 Port Inline Snap-in-Jack Panel	MMCPNLX24SIJ8MIL	Grey

Compatible System Products

Description	Catalogue Number	Colour	Quantity per Pack
Augmented Category 6 Shielded Jack	AC6JAKS000CR	-	12
Augmented Category 6 Unshielded Jack (Tool-free)	AC6JAKU002	Black	12
Category 6 Unshielded Jack (Tool-free)	C6CJAKU002	Black	12
Category 6 Shielded Jack	C6CJAKS000CR	-	12
Category 5 Unshielded Jack (Tool-free)	GPCJAKU002	Black	12
Category 5 Unshielded Jack	GPCJAKU012LF	Black	50
Category 5 Unshielded Jack	GPCJAKU013LF	White	50

Brand-Rex Copper Connectivity - 24 Port Coloured Insert Snap-in-Jack Panels



Product Part Numbering

Description	Catalogue Number	Colour	Qty per pack
Coloured Insert Snap-in-Jack Panel – Black	MMCPNLX24SIJ2CII	Black	1
Coloured Insert Snap-in-Jack Panel – Grey	MMCPNLX24SIJ8CII	Grey	1
Insert – Red	MMCACCINS1	Red	80
Insert – Black	MMCACCINS2	Black	80
Insert – White	MMCACCINS3	White	80
Insert – Blue	MMCACCINS4	Blue	80
Insert – Green	MMCACCINS5	Green	80
Insert – Yellow	MMCACCINS6	Yellow	80
Snap-in-Jack Blank	MMCJAKBLK2	Black	20
Snap-in-Jack Blank	MMCJAKBLK3	White	20
Retraction Tool	MMCIRT001	Red	1

Compatible System Products

Description	Catalogue Number	Colour	Qty per pack
10GPlus Shielded Keystone Snap-in-Jack – Cable Ready	AC6JAKS000CR	-	12
10GPlus Unshielded Jack (Tool-free)	AC6JAKU002	Black	12
Cat6Plus Unshielded Jack (Tool-free)	C6CJAKU002	Black	12
Cat6Plus Shielded Keystone Jack – Cable Ready	C6CJAKS000CR	-	12
GigaPlus Unshielded Jack (Tool-free)	GPCJAKU002	Black	12
GigaPlus Unshielded Jack (Lead Frame)	GPCJAKU012LF	Black	50
GigaPlus Unshielded Jack (Lead Frame)	GPCJAKU013LF	White	50

PRODUCT DESCRIPTION:

The Brand-Rex 19" Snap-in-Jack Patch Panel that accommodates 24 ports within a 1U configuration and provides coloured inserts for individual port/service identification. The product is designed and supplied with a detachable rear cable manager and comes complete with black inserts already loaded into the panel as standard. Optional coloured inserts are available for purchase separately in a variety of colours allowing for individual port/service identification.

PRODUCT CHARACTERISTICS:

Packaging

- Panel and cable manager packaged together in cardboard box, panel populated with black inserts qty 24, all other coloured insert requirements packaged separately in bags containing 8 of each colour, minimum order quantity 10 bags.

Applications

- Equipment racks
- Cabinets

Installation

- Suitable for approved Brand–Rex Snap in Jacks, see compatible parts list below.

MECHANICAL SPECIFICATIONS:

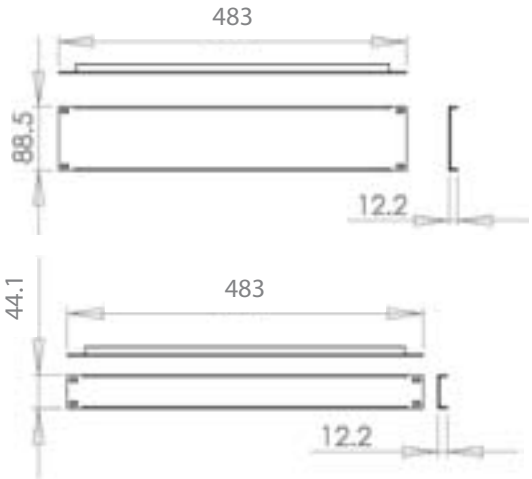
Dimensions

- 483mm × 44.45mm Max (1U) × 121.5mm (w×h×d) [With cable manager assembled]
- Clip in hole dimensions: 14.8mm × 19.8mm (w×h)

Material Data

- Panel and cable manager manufactured from high quality 1.2mm / 1.5mm steel, plated and painted finish
- RAL 9005 Black

Brand-Rex Copper Connectivity - Blank Panels



PRODUCT DESCRIPTION:
1U and 2U blank panels are used to complete any installation in a cabinet. Designed to complement the Brand-Rex range of patch panels, they provide a more aesthetically pleasing finish and offer improved user safety.

PRODUCT CHARACTERISTICS:

1U Rack Mounted

Panel Width:	19" (483mm)
Panel Height:	1U (44.1mm)
Panel Depth:	12.50mm
Colour:	RAL 9005 Black or RAL 7035 Grey
Material:	2.5mm Mild Steel

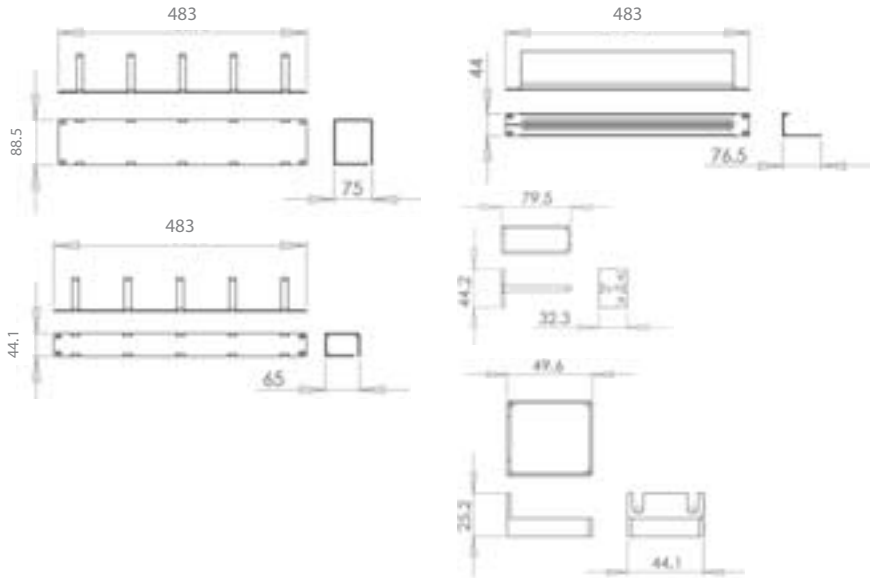
2U Rack Mounted

Panel Width:	19" (483mm)
Panel Height:	2U (88.5mm)
Panel Depth:	12.50mm
Colour:	RAL 9005 Black or RAL 7035 Grey
Material:	2.5mm Mild Steel

Product Part Numbering

	Black	Grey
1U Rack Mounted Blank Panel	MMCACCCM004	MMCACCCM104
2U Rack Mounted Blank Panel	MMCACCCM005	MMCACCCM105

Brand-Rex Copper Connectivity - Cable Management Accessories



PRODUCT DESCRIPTION:
To ensure neat and tidy installations, a range of cable management products is available. These products are either 19" rack mounted or side mounted.

PRODUCT CHARACTERISTICS:

1U 5 Ring Rack Mounted

Panel Width:	19" (483mm)
Panel Height:	1U (44.45mm)
Panel Depth:	65.2mm
Ring Dimensions:	60mm x 40mm x 13mm
Colour:	RAL 9005 Black or RAL 7035 Grey
Material:	2.5mm Mild Steel

1U Rack Mounted with brush

Panel Width:	19" (483mm)
Panel Height:	1U (44.1mm)
Panel Depth:	50mm
Colour:	RAL 9005 Black or RAL 7035 Grey
Material:	1.5mm Mild Steel

2U Rack Mounted

Panel Width:	19" (483mm)
Panel Height:	2U (88.5mm)
Panel Depth:	75mm
Ring Dimensions:	75mm x 75mm x 13mm
Colour:	RAL 9005 Black or RAL 7035 Grey
Material:	2.5mm Mild Steel

Side Mounted Vertical and Horizontal

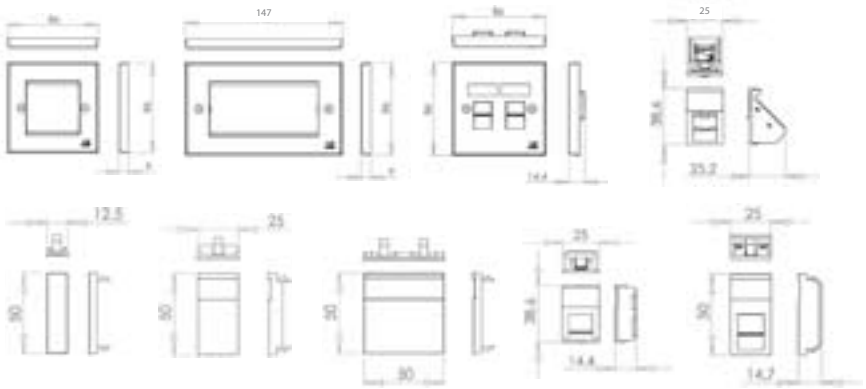
Ring Dimensions (V): 44mm x 23mm x 50mm
Ring Dimensions (H): 44mm x 23mm x 80mm

Colour:	RAL 9005 Black or RAL 7035 Grey
Material:	2.5mm Mild Steel

Product Part Numbering

	Black	Grey
1U Rack Mounted - 5 ring	MMCACCCM001	MMCACCCM101
1U Rack Mounted with brush	MMCACCCM006	MMCACCCM106
2u Rack Mounted - 5 ring	MMCACCCM007	MMCACCCM107
Side Mounted - Horizontal	MMCACCCM003	MMCACCCM103
Side Mounted - Vertical	MMCACCCM002	MMCACCCM102

Brand-Rex Copper Connectivity - UK Styled Plastic Outlets and Accessories



Product Part Numbering

	White
25 x 50mm Shuttered Faceplate Module	MMCWDOUNI062
25 x 50mm Angled Faceplate Module	MMCANG0623
25 x 38mm Shuttered Floorbox Module	MMCWDO06C001
25 x 38mm Angled Floorbox Shuttered Module	MMCANG06C3
25 x 50mm Faceplate Blank	MMCWDOUNI042
25 x 38mm Floorbox Blank	MMCBLK06C001
50 x 50mm Faceplate Blank	MMCWDOUNI040
12.5 x 50mm Faceplate Blank	MMCWDOUNI052
86 x 86mm Single Port Shuttered Faceplate	MMCWDOUNI070
86 x 86mm Double Port Shuttered Faceplate	MMCWDOUNI071
86 x 86mm Single Gang Modular Faceplate	MMCWDOUNI030
86 x 147mm Double Gang Modular Faceplate	MMCWDOUNI031
32mm Deep, Single Gang Backbox	MMCSGBB32001
44mm Deep, Single Gang Backbox	MMCSGBB44001
32mm Deep, Double Gang Backbox	MMCDGBB32002
44mm Deep, Double Gang Backbox	MMCDGBB44002

Not all products are shown

PRODUCT DESCRIPTION:

Brand-Rex supplies a comprehensive range of plastic accessories to provide an outlet solution for wall, trunking and floorbox applications. These accessories have been designed to be used in conjunction with Brand-Rex Snap-In Jacks.

All UK style faceplates are supplied with M3.5 mounting screws and are available in both modular or low cost shuttered versions.

Backboxes can also be supplied to allow for retrofit application where outlets are required to be surface mounted.

Floorbox modules and blanks have been designed to clip into a 1.0 - 2.0mm thick plate with a standard 22 x 37mm floorbox cut-out.

PRODUCT CHARACTERISTICS:

Material:	ABS
Colour:	White
Faceplate Type:	Single or Double Gang
Modular Range:	1 - 4 outlets
Shuttered Range:	1 or 2 outlets

Brand-Rex Copper Connectivity - Snap-In-Jack Modules and Dual Angled Snap-In-Jack Modules

PRODUCT DESCRIPTION:
Brand-Rex single and double Snap-In Jack Modules have been designed to accept the standard Brand-Rex Snap-In Jacks and are fully compatible with the 'Legrand Mosaic' and our continental UNI style faceplates.

PRODUCT CHARACTERISTICS:

Dimensions:	45mm x 45mm
Depth:	14.75mm
Label:	White paper with clip in clear cover
Body Material:	ABS
Colour:	Off White

PRODUCT DESCRIPTION:
The Brand-Rex Dual angled Snap-In-Jack module has been designed to accept two standard Snap-In-Jacks and is fully compatible with the standard 45 x 45mm aperture and our continental UNI style faceplates.

PRODUCT CHARACTERISTICS:

Dimensions:	45 x 45mm
Label:	White paper with clip in clear cover
Body Material:	ABS
Colour:	Artic White

Product Part Numbering

Description	Catalogue Number
1 Way Snap-In Jack Module	MMCUNILGS45001
2 Way Snap-In Jack Module	MMCUNILGD45001
Dual 45 x 45mm Angled Snap-in-Jack module	MMCANGLGD45001

Cross-Connect Cable Management

PRODUCT DESCRIPTION:
The cable management range complements the set of Cross-Connect components offered by Brand-Rex. The horizontal cable organisers can be supplied with or without legs and also as a 19" rack mounted version.

PRODUCT CHARACTERISTICS:
Dimensions
Horizontal Cable Organiser with Legs
271.8 x 46.7 x 111.0mm

Horizontal Cable Organiser without Legs
214.9 x 44.0 x 64.0mm

Horizontal Cable Organiser rack mounted
482.6 x 44.0 x 75.2mm

Organiser Material
Flame retardant thermoplastic rated UL94V-0, off-white

Product Part Numbering

Description	Catalogue Number
Horizontal Cable Organiser with Legs	CMH110L
Horizontal Cable Organiser without Legs	CMH110
Horizontal Cable Organiser Rack Mounted	CMH110R
Vertical Cable Organiser for 110 Tower	CMV110TWR
Vertical Cable Organiser Extension for 110 Tower	CMV110TWRE

Brand-Rex Copper Components - Consumables and Tools

Consumables and Tools

PRODUCT DESCRIPTION:

Within the standard Brand-Rex product range is a set of standard tools for the safe and efficient termination of copper cables. These tools are available for both LSA and 110 style IDC connectors.

Also available is a Brand-Rex Jack Gripper to hold Snap-In-Jacks during termination and the range of snap-in-jack blanks.

Product Part Numbering

Description	Catalogue Number	Colour	Qty per pack
IDC Punchdown Tool Handle (blades sold separately)	MMCD914	-	-
Punchdown Tool Blade - 110	MMCACC110	-	-
Punchdown Tool Blade - LSA	MMCACCLSA	-	-
Jack Gripper	MMCACCLSA	-	-
Snap-in-Jack Blank	MMCJH002	Black	20
Snap-in-Jack Blank	MMCJAKBLK2	White	20
Retraction Tool	MMCJAKBLK3	-	-

Brand-Rex is committed to a future in optical cabling and truly believes in the benefits of optical cables for the future requirement of both LAN and WAN networks. Why? Here are some of the benefits of Brand-Rex Optical Systems.

- **Transmission Security** – As optical fibre emits no electromagnetic energy there is no opportunity to intercept transmissions remotely.
- **Bandwidth** – Optical fibre has a much greater data capacity than copper, carrying more data further.
- **Transmission Distance** – Optical systems have much lower attenuation than copper systems meaning that signals can be transmitted further.
- **No Risk of EMI or RFI** – Fibre optic cables being primarily glass have no risk of electromagnetic or radio frequency interference.

Why Brand-Rex

Brand-Rex offers a complete panel to panel solution, utilising all standard connectors and cable formats to deliver a high quality reliable optical solution for your LAN. The Brand-Rex solution includes a full range of low smoke and high performance tight buffered and loose tube cables, a comprehensive range of connectors, adaptors, pigtails and patch cords. The range also includes all the features that you would expect from a Brand-Rex system component. The complete LAN solution is covered by the 25 year Brand-Rex channel warranty only available from authorised Brand-Rex installation partners.

CABLE SELECTION:

When selecting the correct cable for any installation the first question will be of fibre type. This is dependent upon the transmission distance and the protocol being adopted. Further on in this section is a key to transmission distances on the main fibre types for 1Gb and 10 Gb Ethernet applications. This key is repeated on each page as a reference.

With the choice of fibre type complete, the selection of cable construction must be made. There are several key questions that must be answered in determining cable selection.

Fibre Count -
How many fibres are required?
This should take into account future demand and allow an element of redundancy. The cost of installation and associated down time will generally outweigh the cost of additional fibre on day one.

Additionally, good practice should be taken into consideration. A large high fibre count cable carrying the majority of a company's data generates a larger risk than several lower fibre count cables should any cable damage occur. Diversity in routing should also be considered in answering this question.

Cable Properties –
What type of cable is required?
The prime function of the cable is to provide a safe path for the fibre during and post installation. There are a wide variety of cable types to choose from depending on how and where the cable is to be installed.

A summary of the main construction variants and their intended usage is given below.

Sheath Options:

Universal Cables
These cables are designed for use both internally and externally. They have a Low Smoke Zero Halogen compound sheath that reduces the emission of toxic fumes and reduces the spread of fire.

Outdoor Cables
These cables are designed only for external use. They have a Low Density Polyethylene sheath that makes the cable lighter than the equivalent LSZH version. This combined with reduced weight makes Outdoor Cables more suited to the longer pulled runs into which they are generally installed. Outdoor Cables may enter buildings, however they must not pass more than 3m into the building dependant on local regulations.

Cable Options:

Premise Distribution (PDC) Cables
These cables are based on a 900 µm tight buffered element and are generally installed in the backbone of a building network and direct terminated at a consolidation point. Brand-Rex PDC cables are manufactured in our state of the art UK based factory and consist of up to 24 individual tight buffered elements and distributed strength members. The product is then sheathed with a LSZH compound making it suitable for internal and external applications.

Breakout and Patch Cables
To produce the building block for breakout cables, a 900 µm tight buffered element is sheathed with an additional layer of LSZH compound over a layer of aramid yarns. This forms a simplex sub unit that can be used in the production of optical patch cords or used for fibre to the desk (FTTD) applications; additionally it forms the base unit for the breakout cables.

Brand-Rex breakout cables are generally installed within equipment rooms as rack to rack links and are manufactured in our state of the art UK based factory. They consist of up to 24 simplex sub units with additional strength members and an outer LSZH universal sheath.

Loose Tube Cables
Loose tube cables provide for higher fibre counts than are commonly available in tight buffer element based products such as PDC and breakout cables. They can generally be installed as building or campus links and are available in a variety of constructions offering different mechanical performance.

The building block of a loose tube cable is a PBT tube that contains up to 24 individually coloured optical fibres suspended in a gel material to provide protection and prevent water ingress. These gel filled loose tubes are used to produce either Unitube or Multi Loose Tube cables.

Brand-Rex loose tube cables are manufactured in our UK based optical facility and are available in 4 standard variants;

1. Duct Grade
2. Rodent Resistant Glass Armoured
3. Direct Burial Grade – Single Sheath
4. Direct Burial Grade – Twin Sheath

All 4 variants are available as either Unitube or Multi Loose tube cable. Unitube products are available with up to 24 fibres and Multi Loose Tube products are available with up to 216 fibres as standard, although higher fibre counts are available on request.

The Unitube products take a single gel filled loose tube and apply the relevant armouring and then either a Universal LSZH sheath or a Polyethylene outdoor sheath. The Multi Loose Tube products take up to 18 gel filled loose tubes and SZ strand them around a glass central strength member before adding the relevant armouring and either a Universal LSZH sheath or a Polyethylene outdoor sheath.

The tables below describe the standard fibres supplied by Brand-Rex that comply with or exceed ISO/IEC 11801 and EN50173-1 and EN50173-2 requirements, for use in high speed LAN, MAN, WAN data and telecom networks. Specific Fibre Types to customer specification are available on request.

Part Number Identifier	OM3	Z50	050	H50
IEC 60793-2 Category	10-A1a.2	10-A1a.2	10-A1a	10-A1a
ITU-T Recommendation	G.651	G.651	G.651	G.651
ISO 11801 Class	OM3	Enhanced OM3	OM1 & OM2	OM1 & OM2
Cabled Optical Performance of Fibre				
Attenuation @ 850 / 1300nm (dB/km)	≤ 2.8 / ≤ 0.8	≤ 2.8 / ≤ 0.8	≤ 2.8 / ≤ 0.8	≤ 2.8 / ≤ 0.8
LED Launch Bandwidth @ 850 / 1300nm (MHz.km)	≥ 1500 / ≥ 500	≥ 3500 / ≥ 500	≥ 500 / ≥ 800	≥ 600 / ≥ 1200
EMBc (calculated Effective Modal Bandwidth) @ 850nm (MHz.km)	≥ 2000	≥ 4700		
Attenuation @ 1310 / 1550nm (dB/km)	n/a	n/a	n/a	n/a
Dispersion @ 1310 / 1550nm (ps/nm.km)	n/a	n/a	n/a	n/a
Numerical Aperture	0.200 +/- 0.015	0.200 +/- 0.015	0.200 +/- 0.02	0.200 +/- 0.02
Refractive Index @ 850nm	1.482	1.482	1.482	1.482
Refractive Index @ 1300nm	1.477	1.477	1.477	1.477
Refractive Index @ 1310 / 1550nm	n/a	n/a	n/a	n/a
Geometrical Data				
Core Diameter (µm)	50 +/-2.5	50 +/-2.5	50 +/-2.5	50 +/-2.5
Core / Cladding Concentricity Error (µm)	≤ 1.5	≤ 1.5	≤ 3	≤ 3
Overall Coating Diameter (µm)	245 +/-10	245 +/-10	245 +/-10	245 +/-10
Coating Concentricity Error (µm)	≤ 12.5	≤ 12.5	≤ 12.5	≤ 12.5
Mechanical Data				
Proof Test Level	≥ 1%	≥ 1%	≥ 1%	≥ 1%
	≥ 100kpsi	≥ 100kpsi	≥ 100kpsi	≥ 100kpsi

Part Number Identifier	062	H62	008	D08
IEC 60793-2 Category	10-A1b	10-A1b	50-B1.3	50-B1.3
ITU-T Recommendation			G.652.c / G.652.d	G.652.c / G.652.d
ISO 11801 Class	OM1	OM1	OS2	OS2
Cabled Optical Performance of Fibre				
Attenuation @ 850 / 1300nm (dB/km)	≤ 3.2 / ≤ 0.8	≤ 3.2 / ≤ 0.8	n/a	n/a
Bandwidth @ 850 / 1300nm (MHz.km)	≥ 200 / ≥ 500	≥ 250 / ≥ 800	n/a	n/a
Attenuation @ 1310 / 1550nm (dB/km)	n/a	n/a	≤ 0.38 / ≤ 0.25	≤ 0.38 / ≤ 0.25
Dispersion @ 1310 / 1550nm (ps/nm.km)	n/a	n/a	≤ 3.5 / ≤ 18	≤ 3.5 / ≤ 18
Numerical Aperture	0.275 +/- 0.015	0.275 +/- 0.015	n/a	n/a
Refractive Index @ 850nm	1.496	1.496	n/a	n/a
Refractive Index @ 1300nm	1.491	1.491	n/a	n/a
Refractive Index @ 1310 / 1550nm	n/a	n/a	1.467	1.467
Geometrical Data				
Core Diameter (µm)	62.5 +/-2.5	62.5 +/-2.5		
Mode Field Diameter (µm)			9.3	9.3
Core / Cladding Concentricity Error (µm)	≤ 3	≤ 3	≤ 0.8	≤ 0.8
Overall Coating Diameter (µm)	245 +/-10	245 +/-10	245 +/-10	245 +/-10
Coating Concentricity Error (µm)	≤ 12.5	≤ 12.5	≤ 12.5	≤ 12.5
Mechanical Data				
Proof Test Level	≥ 1%	≥ 1%	≥ 1%	≥ 1%
	≥ 100kpsi	≥ 100kpsi	≥ 100kpsi	≥ 100kpsi

FibrePlus Standard Cable Range

To serve the requirements of optical systems customers, Brand-Rex has created a standard range of Tight Buffered and Loose Tube cables that will meet most requirements. The standard specification of these cables is described in detail on this page.

As a company that is driven by our customers needs, Brand-Rex will always be happy to offer non-standard products to order based on your own specification. This includes complex requirements ranging from fire survival constructions to simple requirements such as composite cables, custom sheath colours or printing. Please enquire about our custom cable service.

STANDARD SHEATH MARKINGS OPTICAL CABLES:

`XXXX Brand-Rex Ltd Optical Fibre Cable HF aaa ddd CCC BBB WW/YY`

KEY:

XXXX	Sequential length marking
aaa	Fibre Type
ddd	Cable Type
CCC	Fibre Count
BBB	Construction
WW	Week of Manufacture
YY	Year of Manufacture

STANDARD SHEATH COLOUR - LOOSE TUBE AND DISTRIBUTION CABLE:

LSZH	Black
Polyethylene	Black

Other colours available on request subject to minimum order quantity.

STANDARD SHEATH COLOUR - BREAKOUT and PATCH CABLE:

Multi Mode	Orange
Single Mode	Yellow

Note:
- For BKT cables, both sub unit sheath and outer sheath follow this format.
- Numeric Identification is provided on sub units on BKT cables.

STANDARD BUFFER COLOUR - BREAKOUT and PATCH CABLE:

62.5/125	Blue
50/125	Green
OM3	Grey
OM3 (enhanced)	Red
8/125	Yellow

STANDARD FIBRE COLOURS:

1.	Blue
2.	Orange
3.	Green
4.	Brown
5.	Grey
6.	White
7.	Red
8.	Black
9.	Yellow
10.	Violet
11.	Pink
12.	Turquoise

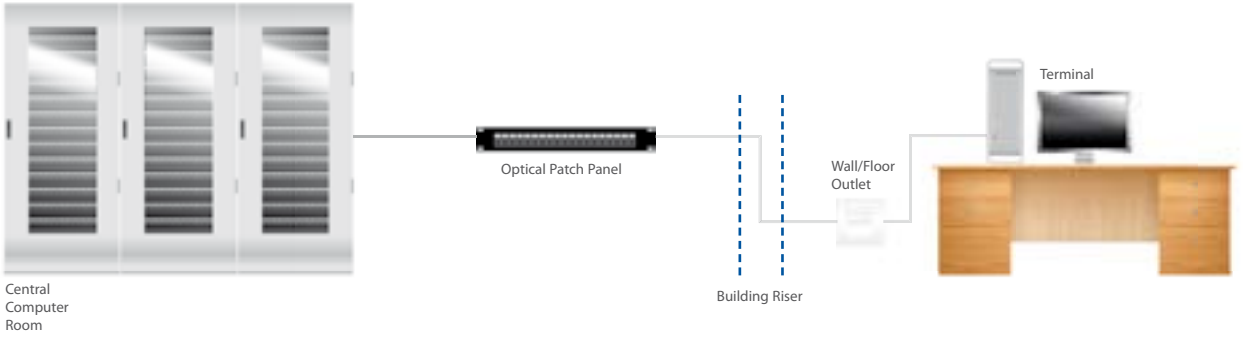
STANDARD TIGHT BUFFERED FIBRE COLOURS:

1.	Blue
2.	Orange
3.	Green
4.	Brown
5.	Grey
6.	White
7.	Red
8.	Black
9.	Yellow
10.	Violet
11.	Pink
12.	Turquoise
13.	Blue/Black
14.	Orange/Black
15.	Green/Black
16.	Brown/Black
17.	Grey/Black
18.	White/Black
19.	Red/Black
20.	Tan/Black
21.	Yellow/Black
22.	Violet/Black
23.	Pink/Black
24.	Turquoise/Black

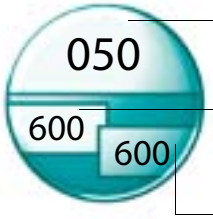
STANDARD MULTI LOOSE TUBE IDENTIFICATION:

1.	Red
2.	Green
3.	Natural
4.	Natural
5.	Natural
6.	Natural
7.	Natural
8.	Natural
9.	Natural
10.	Natural
11.	Natural
12.	Natural
13.	Red
14.	Green
15.	Natural
16.	Natural
17.	Natural
18.	Natural

Note: Where fillers are present in a loose tube design, these will be used as markers and coloured accordingly.



Transmission Distance Identification



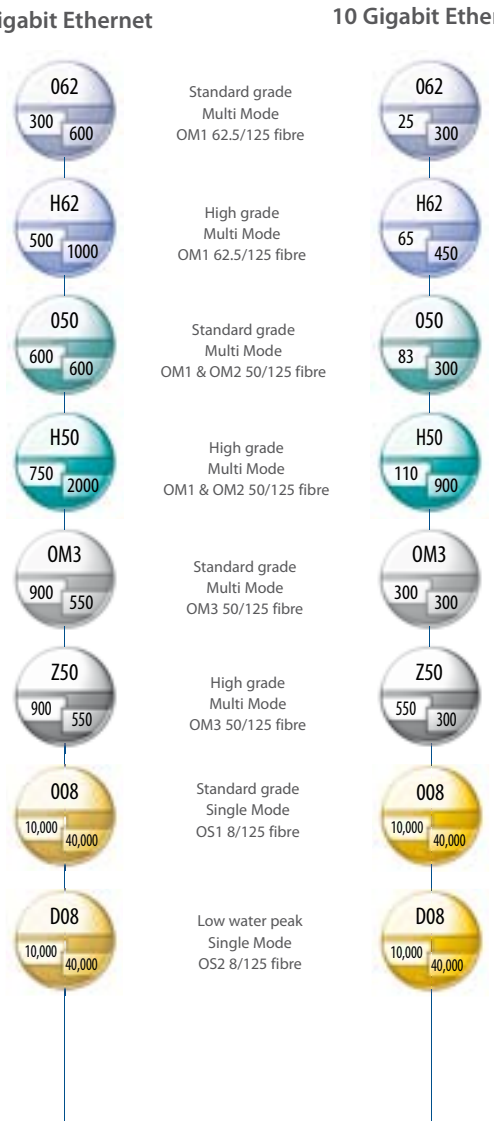
Fibre Type - 050
Brand-Rex standard identification characters for fibre type used in part numbering.

First Window - Transmission distance in metres

Standard Multi Mode	850nm (SX)
High Grade Multi Mode	850nm (SX/SR)
Single Mode	1310nm (LR)

Second Window - Transmission distance in metres

Standard Multi Mode	1300nm (LX)
High Grade Multi Mode	1300nm (LX4)
Single Mode	1550nm (ER)



The FibrePlus product range can be used for conventional structured cabling systems installations and for centralised optical fibre installations. FibrePlus supports the 2000m home run cabling schemes as described in ISO/IEC 11801 and the 300m cabling described in TSB 72, Centralised Optical Fibre Guidelines and TIA/EIA 568B.

Link transmission distances are either attenuation limited or bandwidth limited. In attenuation limited installations the individual loss of each component is summed for all the parts in the link and the sum must fall within the loss limit for the fibre type.

To the left is a summary of the drive distances possible on optical fibre links based on specific protocols. Assuming that the link falls within the attenuation budget of the technology, the distances are recommended based on a typical link comprising 2 splices and 2 connectors.

Optical Performance

The optical performance of the cable required by the current published and new draft standards is shown in the table below.

Fibre Type	Maximum Attentuation (dB/km) 850nm	Maximum Attentuation (dB/km) 1300nm
062	3.5	1.5
H62	3.5	1.5
050	3.5	1.5
H50	3.5	1.5
OM3	3.5	1.5
Z50	3.5	1.5

Fibre Type	Maximum Attentuation (dB/km) 1310nm	Maximum Attentuation (dB/km) 1500nm
008	0.4	0.3
D08	0.4	0.3

Type of Cable

Universal
Suitable for both internal and external use.

Internal
Suitable for internal use.

External
Suitable for external use.

Suitable Installation

Duct Grade
Duct Grade Cable that can be installed into buried duct / sub duct by pulling, winching or blowing.

Direct Buried
A direct burial grade of cable, which has excellent crush resistance and is designed for direct burial installation.

Internal Installation
A cable designed for installation in trunking and floor / roof voids.

Cable Properties

Water Blocked
The cable has been tested for water penetration in accordance with IEC 60794-1-F5 and has less than 3m penetration in a 24hr period under a 1m head of water.

Fire Retardant
The cable is sheathed in a Low Smoke Zero Halogen material and offers IEC 60332-1 performance.

Rodent Resistant
The cable has armouring which offers a degree of resistance to attack from rodents.
- Level 1 minimum
- Level 3 maximum

Non Metallic
The cable is free from metallic elements.

Cable Range

Low Smoke Tight Buffered					
Type:	Distribution	Single Fibre Cable	Zip Cord	Duplex Breakout	Breakout
Design Family:	PDC	SFC	ZIP	DUP	BKT
Part Number Format:	HFfffPDCxxLU	HFfffSFCxxL	HFfffZIPxxL	HFfffDUPxxL	HFfffBKTxxLU
High Performance Tight Buffered					
Type:	Field Deployable	Fire Survival	-	-	-
Design Family:	TFD	UFS	-	-	-
Part Number Format:	HFfffTFDxx	HFfffUNIxxLSTALUFS	-	-	-
Single Loose Tube (UniTube)					
Type:	Duct Grade	Glass Yarn Armoured	Direct Burial	Direct Burial	-
Design Family:	UDU/UDE	URU/URE	USU/USE	UTU/UTE	-
Part Number Format:	HFfffUNIxxLU/NM	HFfffUNIxx(E)LU/NM	HFfffUNIxxSTALU/NM	HFfffUNIxxLSTALU/NMSTANM	-
Multi Loose Tube (6 x 4 ftp)					
Type:	Duct Grade	Glass Yarn Armoured	Direct Burial	Direct Burial	-
Design Family:	MDU 01/MDE 01	MRU 01/MRE 01	MSU 01/MSE 01	MTU 01/MTE 01	-
Part Number Format:	HFfffSxxWLU/NM	HFfffSxxW(E)LU/NM	HFfffSxxWSTALU/NM	HFfffSxxLSTALU/NMSTANM	-
Multi Loose Tube (6 x 12 ftp)					
Type:	Duct Grade	Glass Yarn Armoured	Direct Burial	Direct Burial	-
Design Family:	MDU 02/MDE 02	MRU 02/MRE 02	MSU 02/MSE 02	MTU 02/MTE 02	-
Part Number Format:	HFfffSxxWLU/NM	HFfffSxxW(E)LU/NM	HFfffSxxWSTALU/NM	HFfffSxxLSTALU/NMSTANM	-
Multi Loose Tube (8 x 12 ftp)					
Type:	Duct Grade	Glass Yarn Armoured	Direct Burial	Direct Burial	-
Design Family:	MDU 04/MDE 04	MRU 04/MRE 04	MSU 04/MSE 04	MTU 04/MTE 04	-
Part Number Format:	HFfffSxxWLU/NM	HFfffSxxW(E)LU/NM	HFfffSxxWSTALU/NM	HFfffSxxLSTALU/NMSTANM	-
Multi Loose Tube (12 x 12 ftp)					
Type:	Duct Grade	Glass Yarn Armoured	Direct Burial	Direct Burial	-
Design Family:	MDU 03/MDE 03	MRU 03/MRE 03	MSU 03/MSE 03	MTU 03/MTE 03	-
Part Number Format:	HFfffSxxWLU/NM	HFfffSxxW(E)LU/NM	HFfffSxxWSTALU/NM	HFfffSxxLSTALU/NMSTANM	-
Multi Loose Tube (18 x 12 ftp)					
Type:	Duct Grade	Glass Yarn Armoured	Direct Burial	Direct Burial	-
Design Family:	MDU 05/MDE 05	MRU 05/MRE 05	MSU 05/MSE 05	MTU 05/MTE 05	-
Part Number Format:	HFfffSxxWLU/NM	HFfffSxxW(E)LU/NM	HFfffSxxWSTALU/NM	HFfffSxxLSTALU/NMSTANM	-

Fibre Optic Link and Channel transmission distances

Brand-Rex Cabling Systems include two separate optical cable product ranges: Blolite+ and FibrePlus. Each set can be used for conventional structured cabling systems installations and for Centralised Optical Fibre installations.

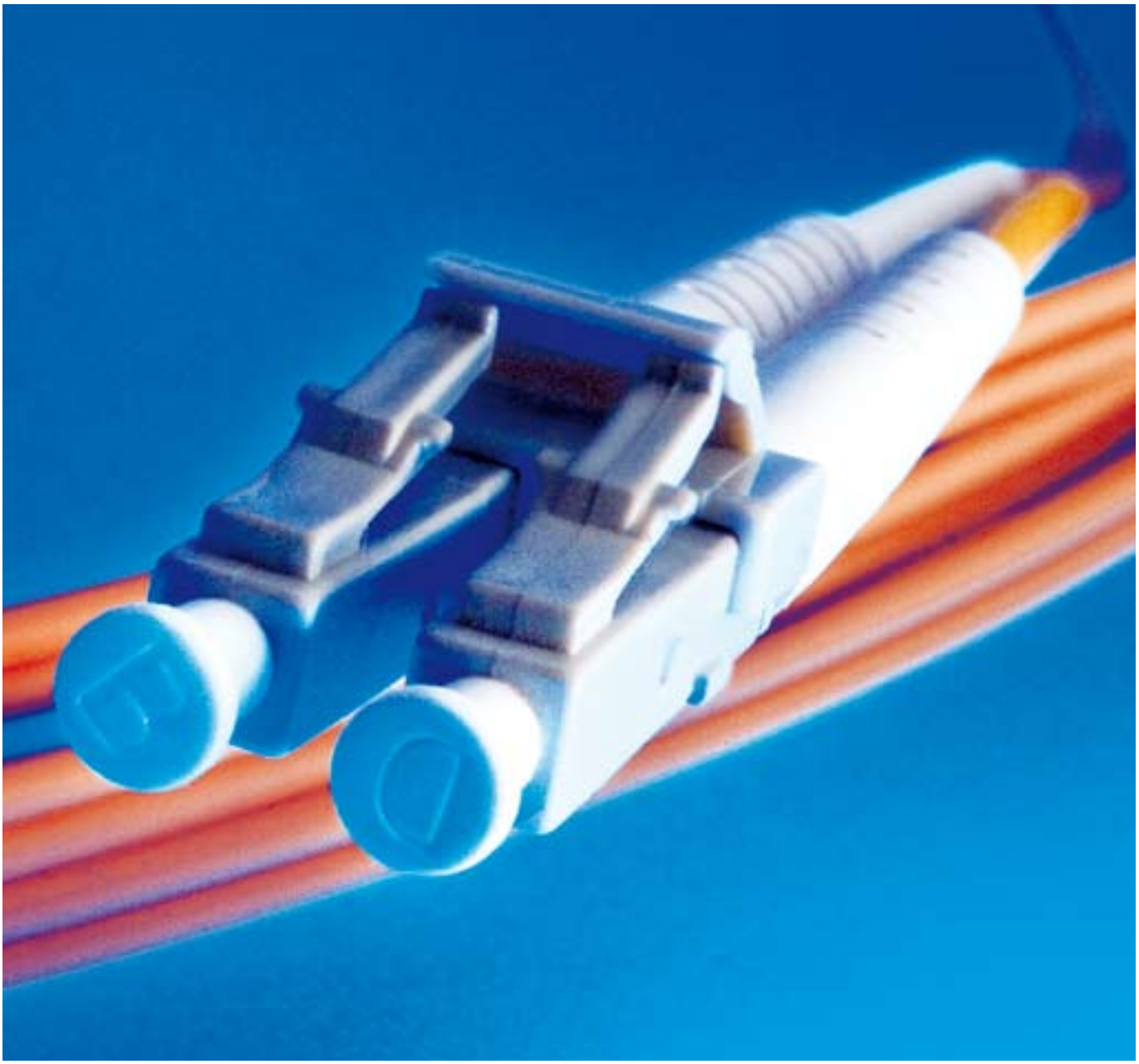
Brand-Rex optical cable systems support the 2000m home run cabling schemes as described in ISO 11801 2nd edition and the 300 m cabling described in TSB 72, Centralised Optical Fibre Guidelines and TIA/EIA 568B.

Link transmission distances are either attenuation limited or bandwidth limited. In attenuation limited installations the individual loss of each component is summed for all the parts in the link and the sum must fall within the loss limit for the fibre type.

The table above provides a summary of the drive distances possible on optical fibre links per applications protocol assuming that the link falls within the attenuation budget of the technology, the distances are recommended based on a typical link comprising 2 splices and 2 connectors.

	Application	Wave Length	Distance 62.5/125 OM1	Distance 50/125 OM2	Distance 50/125 OM3	Distance 8/125 OS1
Ethernet	10BASE-FL	850 nm	2000m	1340m	1340m	-
Fast Ethernet	100BASE-SX	850 nm	300m	300m	300m	-
	100 BASE-FX	1300 nm	2000m	2000m	2000m	-
Gigabit Ethernet	1000BASE-SX*	850 nm	275m	550m	550m	-
	1000BASE-LX*	1300 nm	550m	550m	550m	5000m
10 Gigabit Ethernet	10GBASE-S*	850 nm	2-26m	2-82m	2-300m	-
	10GBASE-L	1310 nm	-	-	-	2m – 10km
	10GBASE-LX-4*	1310 nm	2-300m	2-300m	2-300m	2m – 10km
	10GBASE-E	1550 nm	-	-	-	2m – 40km
ATM	ATM 155*	1300 nm	2000m	2000m	-	-
	ATM 155 swl*	850 nm	1000m	1000m	-	-
	ATM 622*	1300 nm	500m	500m	-	15km
	FDDI	1300 nm	2000m	2000m	-	-
	Token Ring	850 nm	2000m	1400m	-	-
Fibre Channel	Fibre Channel 133	850 nm	2000m	2000m	-	-
	Fibre Channel 266	850 nm	700m	2000m	-	-
	Fibre Channel 531	850 nm	350m	1000m	-	-
	Fibre Channel 1062*	850 nm	300m	500m	-	-
	Fibre Channel 1062	1300 nm	-	-	-	10km

** links length limited by fibre bandwidth – in addition to the attenuation limit.*

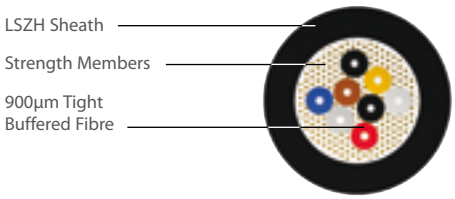


Distribution cables
FibrePlus distribution cables are based around standard 900 µm tight buffered element which offers excellent environmental performance. The standard range of distribution cables is available with up to 24 fibres and the cables are designed for use in building backbone applications. Cable can be installed in cable conduits by pulling or alternatively can be laid in roof / floor voids.

The FibrePlus distribution cable range has a Low Smoke Zero Halogen sheath and mechanical strength is derived from strength members surrounding the multiple tight buffered cores.

Breakout and patch cord cables
FibrePlus breakout cables are based on standard 2.80mm single fibre cable sub units and are designed for use in building backbone applications or for cross connections in equipment rooms with suitable terminations. The cables are designed to be pulled into conduits or alternatively can be placed in floor / roof void cable trays.

The single fibre cable sub unit consists of a 900 µm tight buffered fibre surrounded with aramid yarns and a Low Smoke Zero Halogen sheath. The breakout cable takes these sub unit, and adds additional aramid strength members plus an outer Low Smoke Zero Halogen sheath to give a metal-free robust and flexible breakout cable.



Brand-Rex Optical Cables - Universal PDC

Tight Buffered Premise Distribution Cables

Compact Design
Water Blocked Design
Low Smoke Halogen Free Sheath

Product Data

	Diameter mm	Weight kg / km	Max Tensile Load N	Min Static Bend mm	Min Dynamic Bend mm
2 Fibre	4.80	22	460	50	75
4 Fibre	5.00	25	640	55	80
6 Fibre	5.60	29	730	60	85
8 Fibre	5.90	34	920	65	95
12 Fibre	6.50	41	1100	70	100
16 Fibre	7.20	47	1430	75	113
24 Fibre	8.30	62	1430	85	128

PRODUCT DESCRIPTION:

For building backbone and horizontal distribution applications, the PDC cable range has been designed to be compact and yet offer excellent tensile performance making it suitable for a wide range of applications. The universal construction enables the cable to be used internally and externally without the need for transition cable joints.

All universal PDC cables are constructed around the 900µm tight buffered elements which are suitable for direct termination.

Product Part Numbering

	62.5/125	50/125	OM3	8/125
2 Fibre	HF 062 PDC02 LU	HF 050 PDC02 LU	HF OM3 PDC02 LU	HF 008 PDC02 LU
4 Fibre	HF 062 PDC04 LU	HF 050 PDC04 LU	HF OM3 PDC04 LU	HF 008 PDC04 LU
6 Fibre	HF 062 PDC06 LU	HF 050 PDC06 LU	HF OM3 PDC06 LU	HF 008 PDC06 LU
8 Fibre	HF 062 PDC08 LU	HF 050 PDC08 LU	HF OM3 PDC08 LU	HF 008 PDC08 LU
12 Fibre	HF 062 PDC12 LU	HF 050 PDC12 LU	HF OM3 PDC12 LU	HF 008 PDC12 LU
16 Fibre	HF 062 PDC16 LU	HF 050 PDC16 LU	HF OM3 PDC16 LU	HF 008 PDC16 LU
24 Fibre	HF 062 PDC24 LU	HF 050 PDC24 LU	HF OM3 PDC24 LU	HF 008 PDC24 LU

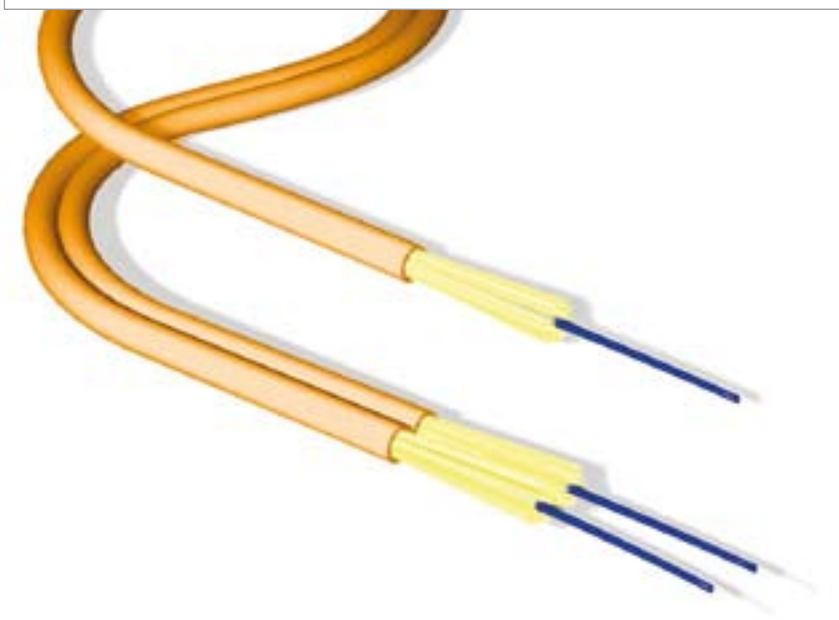
PRODUCT PERFORMANCE:

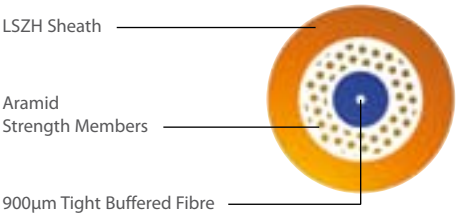
Crush (N):
2000
Impact (Nm):
15
Torsion (turns / m):
5
Fire:
IEC 60332-1

Temp - Operation:
-20°c to +60°c
Temp - Storage:
-20°c to +60°c
Temp - Installation:
-15°c to +60°c
Water Penetration:
≤3m @ 24 hours

Fibre Selection

062 H62 | 050 H50 | OM3 Z50 | 008 D08





Brand-Rex Optical Cables - SFC and ZIP

Ruggedised Fibre Patch Cable

Rugged Construction for Indoor, Short Run Patching

Easily configured into patch cords

Colour coded for identification

Product Data

	Diameter mm	Weight kg / km	Max Tensile Load N	Min Static Bend mm	Min Dynamic Bend mm
1 Fibre	2.80	8	200	30	45
2 Fibre	2.80 x 5.90	17	400	30 (minor axis)	45 (major axis)

Colour Coding - Core		Colour Coding - Sheath	
62.5/125	Blue	62.5/125	Orange
50/125	Green	50/125	Orange
OM3	Grey	OM3	Orange
008/125	Yellow	008/125	Yellow

Non standard colour options are available on request.

Product Part Numbering

	62.5/125	50/125	OM3	8/125
1 Fibre	HF 062 SFC01 L	HF 050 SFC01 L	HF OM3 SFC01 L	HF 008 SFC01 L
2 Fibre	HF 062 ZIP02 L	HF 050 ZIP02 L	HF OM3 ZIP02 L	HF 008 ZIP02 L

Fibre Selection

062 H62 | 050 H50 | OM3 Z50 | 008 D08

PRODUCT DESCRIPTION:

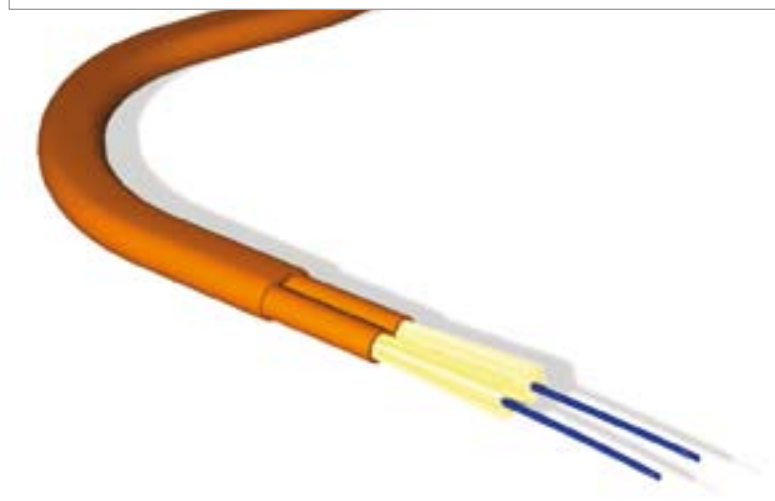
Ruggedised tight buffered patching cable is used in the manufacture of patch cords. The robust construction is designed for short run indoor patching or where frequent handling is likely such as in equipment rooms, wiring closets and at user outlets. The cable is readily retained by industry standard connectors and can easily be made into a patch cord.

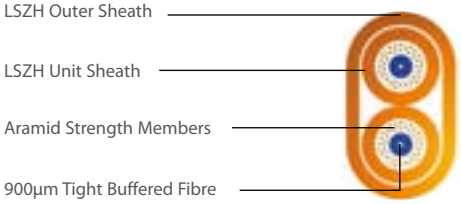
The single fibre cable is colour coded for ease of identification during and post installation.

PRODUCT PERFORMANCE:

Crush (N):
1500
Impact (Nm):
5
Torsion (turns / m):
5
Fire:
IEC 60332-1

Temp - Operation:
-20°c to +60°c
Temp - Storage:
-20°c to +60°c
Temp - Installation:
-15°c to +60°c





Brand-Rex Optical Cables - DUP

Ruggedised Duplex Breakout Cable

Rugged Construction for Indoor, Short Run Patching

Easily configured into patch cords

Colour coded for identification

Product Data

	Diameter mm	Weight kg / km	Max Tensile Load N	Min Static Bend mm	Min Dynamic Bend mm
2 Fibre	3.80 x 6.60	29	400	40 (minor axis)	60 (minor axis)

Colour Coding - Core		Colour Coding - Ruggedised Unit	
62.5/125	Blue	62.5/125	Orange
50/125	Green	50/125	Orange
OM3	Grey	OM3	Orange
Enhanced OM3	Red	Enhanced OM3	Orange
008/125	Yellow	008/125	Yellow

Product Part Numbering

	62.5/125	50/125	OM3	8/125
2 Fibre	HF 062 DUP02 L	HF 050 DUP02 L	HF OM3 DUP02 L	HF 008 DUP02 L

Fibre Selection

062 H62 | 050 H50 | OM3 Z50 | 008 D08

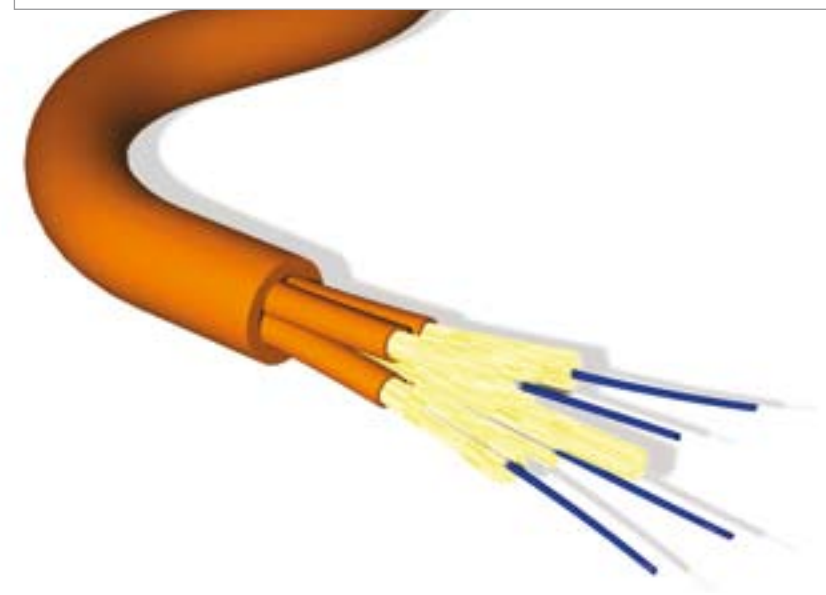
PRODUCT DESCRIPTION:

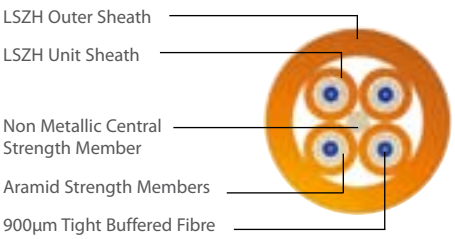
The duplex fibre cable is the building block for ruggedised pigtail and patch cords. The robust construction is designed for short run indoor patching or where frequent handling is likely such as in equipment rooms, wiring closets and at user outlets.

PRODUCT PERFORMANCE:

Crush (N):
2000
Impact (Nm):
5
Torsion (turns / m):
5
Fire:
IEC 60332-1

Temp - Operation:
-20°c to +60°c
Temp - Storage:
-20°c to +60°c
Temp - Installation:
-15°c to +60°c





Brand-Rex Optical Cables - BKT

Breakout Cables

Based on 2.80mm ruggedised sub units
Non metallic central strength member

Product Data

	Diameter mm	Weight kg / km	Max Tensile Load N	Min Static Bend mm	Min Dynamic Bend mm
4 Fibre	9.75	85	1000	98	147
6 Fibre	11.40	112	1000	114	171
8 Fibre	13.20	164	1000	132	198
12 Fibre	14.55	179	1000	146	219
16 Fibre	16.85	251	1000	169	254
24 Fibre	20.30	374	1000	203	305

Product Part Numbering

	62.5/125	50/125	OM3	8/125
4 Fibre	HF 062 BKT04 LU	HF 050 BKT04 LU	HF 0M3 BKT04 LU	HF 008 BKT04 LU
6 Fibre	HF 062 BKT06 LU	HF 050 BKT06 LU	HF 0M3 BKT06 LU	HF 008 BKT06 LU
8 Fibre	HF 062 BKT08 LU	HF 050 BKT08 LU	HF 0M3 BKT08 LU	HF 008 BKT08 LU
12 Fibre	HF 062 BKT12 LU	HF 050 BKT12 LU	HF 0M3 BKT12 LU	HF 008 BKT12 LU
16 Fibre	HF 062 BKT16 LU	HF 050 BKT16 LU	HF 0M3 BKT16 LU	HF 008 BKT16 LU
24 Fibre	HF 062 BKT24 LU	HF 050 BKT24 LU	HF 0M3 BKT24 LU	HF 008 BKT24 LU

Fibre Selection

062 H62 | 050 H50 | OM3 Z50 | 008 D08

PRODUCT DESCRIPTION:

For use in building backbone applications or horizontal distribution, the BKT product range is both lightweight and compact yet offers good mechanical and environmental performance.

The BKT product range consists of standard 2.80mm sub units around non metallic central strength members.

PRODUCT PERFORMANCE:

Crush (N):
2000
Impact (Nm):
30
Torsion (turns / m):
5
Fire:
IEC 60332-1

Temp - Operation:
-20°c to +60°c
Temp - Storage:
-20°c to +60°c
Temp - Installation:
-15°c to +60°c
Water Penetration:
<3m @ 24 hours

DC

DATACENTRE

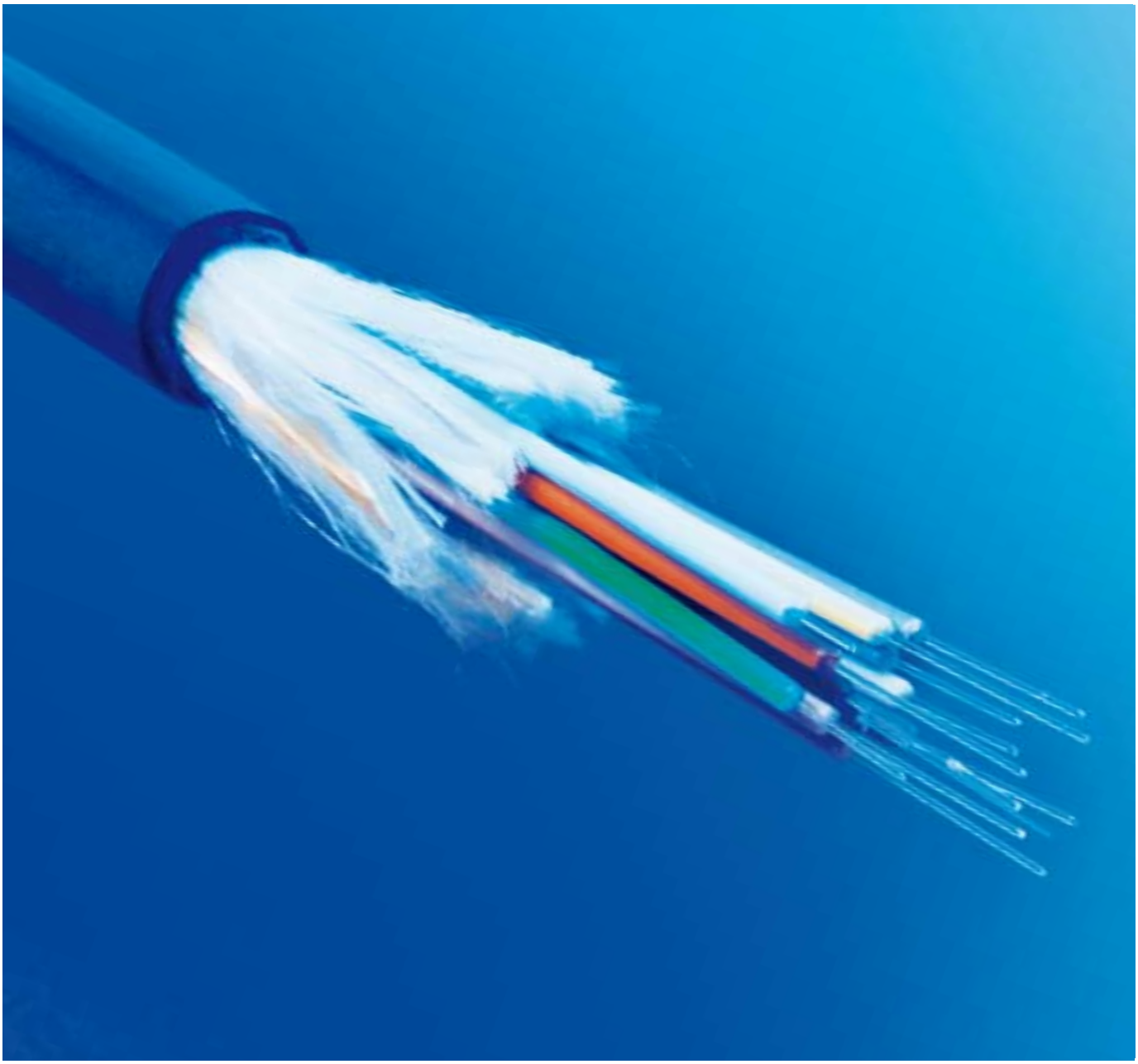
High speed connectivity for today's datacentre

Brand-Rex provides industry leading cabling solutions into the structured wiring cable markets including the Datacentre sector. This market is an arena where the assured reliability of high speed transmissions on Copper or Fibre multi-connector links is a qualifier. Network resilience and standards conformance are required. It is also uniquely characterised as a sector where innovations in transmission technologies, cable and connectivity designs, installation methodology and change control are constantly emerging and are quickly and readily adopted. While Brand-Rex's standard ranges of products are used extensively in datacentres today, the company is introducing additions to the range which will enhance and improve the set.

The benefits include improved connectivity modularity, enhanced performance levels, increased efficiency in the use of space in racks and pathways.

Brand-Rex

For more information visit:
www.brand-rex.com/datacentres



FibrePlus loose tube cables are available in unitube or multi loose tube constructions, in three standard variants. Multi loose tube cables are available as standard in 6 x 4 fibre per tube, 6 x 12 fibre per tube, 8 x 12 fibre per tube, 12 x 12 fibre per tube and 18 x 12 fibre per tubes options, offering up to 216 fibres.

The three standard variants are a general duct grade cable; a glass yarn armoured cable and a corrugated steel tape armoured direct burial cable.

Loose tube cables are designed for use in building or campus backbone applications and can be installed by blowing, winching or pulling into existing sub ducts or cable conduits. Steel tape armoured products can also be direct buried.

Bespoke loose tube cables to client specifications with additional features or modified mechanical performance are available on request subject to MOQ and lead-time.

Brand-Rex Optical Cables - UDU and UDE

Duct Grade Unitube Cables

Product Data

	Diameter mm	Weight (U)/(E) kg / km	Max Tensile Load N	Min Static Bend mm	Min Dynamic Bend mm
4 - 12 Fibre	6.90	51/37	700	69	104
16 - 24 Fibre (2 x Bundles)	7.80	63/47	700	78	117

Product Part Numbering - UDU

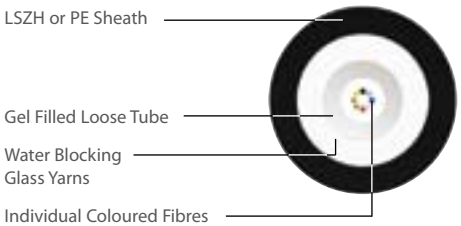
	62.5/125	50/125	OM3	8/125
4 Fibre	HF 062 UNI4 LU	HF 050 UNI4 LU	HF OM3 UNI4 LU	HF 008 UNI4 LU
6 Fibre	HF 062 UNI6 LU	HF 050 UNI6 LU	HF OM3 UNI6 LU	HF 008 UNI6 LU
8 Fibre	HF 062 UNI8 LU	HF 050 UNI8 LU	HF OM3 UNI8 LU	HF 008 UNI8 LU
12 Fibre	HF 062 UNI12 LU	HF 050 UNI12 LU	HF OM3 UNI12 LU	HF 008 UNI12 LU
16 Fibre (2 x Bundles)	HF 062 UNI16 LU	HF 050 UNI16 LU	HF OM3 UNI16 LU	HF 008 UNI16 LU
24 Fibre (2 x Bundles)	HF 062 UNI24 LU	HF 050 UNI24 LU	HF OM3 UNI24 LU	HF 008 UNI24 LU

Product Part Numbering - UDE

	62.5/125	50/125	OM3	8/125
4 Fibre	HF 062 UNI4 NM	HF 050 UNI4 NM	HF OM3 UNI4 NM	HF 008 UNI4 NM
6 Fibre	HF 062 UNI6 NM	HF 050 UNI6 NM	HF OM3 UNI6 NM	HF 008 UNI6 NM
8 Fibre	HF 062 UNI8 NM	HF 050 UNI8 NM	HF OM3 UNI8 NM	HF 008 UNI8 NM
12 Fibre	HF 062 UNI12 NM	HF 050 UNI12 NM	HF OM3 UNI12 NM	HF 008 UNI12 NM
16 Fibre (2 x Bundles)	HF 062 UNI16 NM	HF 050 UNI16 NM	HF OM3 UNI16 NM	HF 008 UNI16 NM
24 Fibre (2 x Bundles)	HF 062 UNI24 NM	HF 050 UNI24 NM	HF OM3 UNI24 NM	HF 008 UNI24 NM

Fibre Selection

062 H62 | 050 H50 | OM3 Z50 | 008 D08



Compact Water Blocked Design
Up to 24 Fibres
Level 1 Rodent Protection
Choice of Universal or External Sheath

PRODUCT DESCRIPTION:

For building backbone applications, the duct grade unitube cable range has been designed to be lightweight and compact.

The 4-12 fibre product variants are constructed around a 2.90mm gel filled loose tube, whereas the 16-24 fibre variants use a 4.00mm loose tube.

PRODUCT PERFORMANCE:

Crush (N):
2000
Impact (Nm):
15
Torsion (turns / m):
5
Fire:
IEC 60332-1 (UDU only)

Temp - Operation:
-40°c to +70°c
Temp - Storage:
-40°c to +70°c
Temp - Installation:
-10°c to +70°c
Water Penetration:
<3m @ 24h

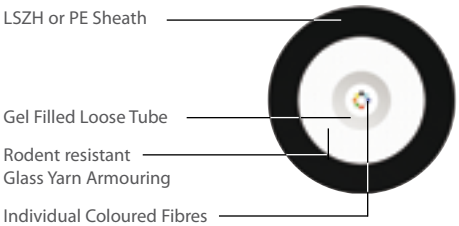
Tested in accordance with IEC 60794-1-2 unless stated

Brand-Rex Optical Cables - URU and URE

Glass Yarn Armoured Unitube Cable

Product Data

	Diameter mm	Weight (U)/(E) kg / km	Max Tensile Load N	Min Static Bend mm	Min Dynamic Bend mm
4 - 12 Fibre	9.40	104/81	3000	94	141
16 - 24 Fibre (2 x Bundles)	11.00	142/114	3000	110	165



Compact Water Blocked Design
Glass Yarn Armouring
Level 2 Rodent Protection
Up to 24 fibres
Choice of Universal or External Sheath

Product Part Numbering - URU

	62.5/125	50/125	OM3	8/125
4 Fibre	HF 062 UNI4 (E) LU	HF 050 UNI4 (E) LU	HF OM3 UNI4 (E) LU	HF 008 UNI4 (E) LU
6 Fibre	HF 062 UNI6 (E) LU	HF 050 UNI6 (E) LU	HF OM3 UNI6 (E) LU	HF 008 UNI6 (E) LU
8 Fibre	HF 062 UNI8 (E) LU	HF 050 UNI8 (E) LU	HF OM3 UNI8 (E) LU	HF 008 UNI8 (E) LU
12 Fibre	HF 062 UNI12 (E) LU	HF 050 UNI12 (E) LU	HF OM3 UNI12 (E) LU	HF 008 UNI12 (E) LU
16 Fibre (2 x Bundles)	HF 062 UNI16 (E) LU	HF 050 UNI16 (E) LU	HF OM3 UNI16 (E) LU	HF 008 UNI16 (E) LU
24 Fibre (2 x Bundles)	HF 062 UNI24 (E) LU	HF 050 UNI24 (E) LU	HF OM3 UNI24 (E) LU	HF 008 UNI24 (E) LU

Product Part Numbering - URE

	62.5/125	50/125	OM3	8/125
4 Fibre	HF 062 UNI4 (E) NM	HF 050 UNI4 (E) NM	HF OM3 UNI4 (E) NM	HF 008 UNI4 (E) NM
6 Fibre	HF 062 UNI6 (E) NM	HF 050 UNI6 (E) NM	HF OM3 UNI6 (E) NM	HF 008 UNI6 (E) NM
8 Fibre	HF 062 UNI8 (E) NM	HF 050 UNI8 (E) NM	HF OM3 UNI8 (E) NM	HF 008 UNI8 (E) NM
12 Fibre	HF 062 UNI12 (E) NM	HF 050 UNI12 (E) NM	HF OM3 UNI12 (E) NM	HF 008 UNI12 (E) NM
16 Fibre (2 x Bundles)	HF 062 UNI16 (E) NM	HF 050 UNI16 (E) NM	HF OM3 UNI16 (E) NM	HF 008 UNI16 (E) NM
24 Fibre (2 x Bundles)	HF 062 UNI24 (E) NM	HF 050 UNI24 (E) NM	HF OM3 UNI24 (E) NM	HF 008 UNI24 (E) NM

Fibre Selection

062 H62 | 050 H50 | OM3 Z50 | 008 D08

PRODUCT DESCRIPTION:

For applications where protection from rodent attack is required, this product range offers level 2 rodent protection in the form of glass roving armour which deters rodents from chewing on optical cables.

The 4-12 fibre product variants are constructed around a 2.90mm gel filled loose tube, whereas the 16-24 fibre variants use a 4.00mm loose tube.

PRODUCT PERFORMANCE:

Crush (N):
2500
Impact (Nm):
25
Torsion (turns / m):
5
Fire:
IEC 60332-1 (URU only)

Temp - Operation:
-40°c to +70°c
Temp - Storage:
-40°c to +70°c
Temp - Installation:
-10°c to +70°c
Water Penetration:
<3m @ 24h

Tested in accordance with IEC 60794-1-2 unless stated

Brand-Rex Optical Cables - USU and USE

Steel Tape Armoured Unitube Cables

Product Data

	Diameter mm	Weight (U)/(E) kg / km	Max Tensile Load N	Min Static Bend mm	Min Dynamic Bend mm
4 - 12 Fibre	10.50	128/101	700	105	158
16 - 24 Fibre (2 x Bundles)	10.50	128/101	700	105	158

Product Part Numbering - USU

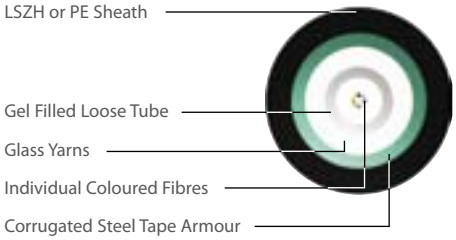
	62.5/125	50/125	OM3	8/125
4 Fibre	HF 062 UNI4 STA LU	HF 050 UNI4 STA LU	HF OM3 UNI4 STA LU	HF 008 UNI4 STA LU
6 Fibre	HF 062 UNI6 STA LU	HF 050 UNI6 STA LU	HF OM3 UNI6 STA LU	HF 008 UNI6 STA LU
8 Fibre	HF 062 UNI8 STA LU	HF 050 UNI8 STA LU	HF OM3 UNI8 STA LU	HF 008 UNI8 STA LU
12 Fibre	HF 062 UNI12 STA LU	HF 050 UNI12 STA LU	HF OM3 UNI12 STA LU	HF 008 UNI12 STA LU
16 Fibre	HF 062 UNI16 STA LU	HF 050 UNI16 STA LU	HF OM3 UNI16 STA LU	HF 008 UNI16 STA LU
24 Fibre	HF 062 UNI24 STA LU	HF 050 UNI24 STA LU	HF OM3 UNI24 STA LU	HF 008 UNI24 STA LU

Product Part Numbering - USE

	62.5/125	50/125	OM3	8/125
4 Fibre	HF 062 UNI4 STA NM	HF 050 UNI4 STA NM	HF OM3 UNI4 STA NM	HF 008 UNI4 STA NM
6 Fibre	HF 062 UNI6 STA NM	HF 050 UNI6 STA NM	HF OM3 UNI6 STA NM	HF 008 UNI6 STA NM
8 Fibre	HF 062 UNI8 STA NM	HF 050 UNI8 STA NM	HF OM3 UNI8 STA NM	HF 008 UNI8 STA NM
12 Fibre	HF 062 UNI12 STA NM	HF 050 UNI12 STA NM	HF OM3 UNI12 STA NM	HF 008 UNI12 STA NM
16 Fibre	HF 062 UNI16 STA NM	HF 050 UNI16 STA NM	HF OM3 UNI16 STA NM	HF 008 UNI16 STA NM
24 Fibre	HF 062 UNI24 STA NM	HF 050 UNI24 STA NM	HF OM3 UNI24 STA NM	HF 008 UNI24 STA NM

Fibre Selection

062 H62 | 050 H50 | OM3 Z50 | 008 D08



Steel Tape Armouring
Maximum Protection from Rodents
Choice of Universal or External Sheath

PRODUCT DESCRIPTION:

For direct burial campus backbone applications, the steel tape armoured unitube cable range has been designed to be compact and yet offer excellent tensile and crush performance making it suitable for a wide range of applications.

All USU and USE steel tape armoured unitube cables are constructed around the 4.00mm gel filled PBT loose buffer tube. The 16-24 fibre variants supplied with 2 bundles within the loose tube.

PRODUCT PERFORMANCE:

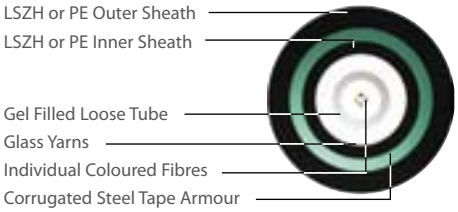
Crush (N):
4000
Impact (Nm):
30
Torsion (turns / m):
5
Fire:
IEC 60332-1 (USU only)

Temp - Operation:
-40°c to +70°c

Temp - Storage:
-40°c to +70°c

Temp - Installation:
-10°c to +70°c

Tested in accordance with IEC 60794-1-2 unless stated



Brand-Rex Optical Cables - UTU and UTE

Twin Sheath Steel Tape Armoured Unitube Cables

Product Data

	Diameter mm	Weight (U)/(E) kg / km	Max Tensile Load N	Min Static Bend mm	Min Dynamic Bend mm
4 - 12 Fibre	13.00	224/155	700	130	195
16 - 24 Fibre (2 x Bundles)	13.00	224/155	700	130	195

Twin Sheath Water Blocked Design
Steel Tape Armouring
Maximum Rodent Protection
Choice of Universal or External Sheath

Product Part Numbering - UTU

	62.5/125	50/125	OM3	8/125
4 Fibre	HF 062 UNI4 L STA LU	HF 050 UNI4 L STA LU	HF OM3 UNI4 L STA LU	HF 008 UNI4 L STA LU
6 Fibre	HF 062 UNI6 L STA LU	HF 050 UNI6 L STA LU	HF OM3 UNI6 L STA LU	HF 008 UNI6 L STA LU
8 Fibre	HF 062 UNI8 L STA LU	HF 050 UNI8 L STA LU	HF OM3 UNI8 L STA LU	HF 008 UNI8 L STA LU
12 Fibre	HF 062 UNI12 L STA LU	HF 050 UNI12 L STA LU	HF OM3 UNI12 L STA LU	HF 008 UNI12 L STA LU
16 Fibre	HF 062 UNI16 L STA LU	HF 050 UNI16 L STA LU	HF OM3 UNI16 L STA LU	HF 008 UNI16 L STA LU
24 Fibre	HF 062 UNI24 L STA LU	HF 050 UNI24 L STA LU	HF OM3 UNI24 L STA LU	HF 008 UNI24 L STA LU

Product Part Numbering - UTE

	62.5/125	50/125	OM3	8/125
4 Fibre	HF 062 UNI4 NM STA NM	HF 050 UNI4 NM STA NM	HF OM3 UNI4 NM STA NM	HF 008 UNI4 NM STA NM
6 Fibre	HF 062 UNI6 NM STA NM	HF 050 UNI6 NM STA NM	HF OM3 UNI6 NM STA NM	HF 008 UNI6 NM STA NM
8 Fibre	HF 062 UNI8 NM STA NM	HF 050 UNI8 NM STA NM	HF OM3 UNI8 NM STA NM	HF 008 UNI8 NM STA NM
12 Fibre	HF 062 UNI12 NM STA NM	HF 050 UNI12 NM STA NM	HF OM3 UNI12 NM STA NM	HF 008 UNI12 NM STA NM
16 Fibre	HF 062 UNI16 NM STA NM	HF 050 UNI16 NM STA NM	HF OM3 UNI16 NM STA NM	HF 008 UNI16 NM STA NM
24 Fibre	HF 062 UNI24 NM STA NM	HF 050 UNI24 NM STA NM	HF OM3 UNI24 NM STA NM	HF 008 UNI24 NM STA NM

Fibre Selection

062 H62 | 050 H50 | OM3 Z50 | 008 D08

PRODUCT DESCRIPTION:

For direct burial campus backbone applications, the twin sheath universal steel tape armoured unitube cable range has been designed to be compact and yet offer excellent tensile and crush performance making it suitable for a wide range of applications.

The 4-12 fibre product variants are constructed around a 2.90mm gel filled loose tube, whereas the 16-24 fibre variants use a 4.00mm loose tube.

PRODUCT PERFORMANCE:

Crush (N):
5000
Impact (Nm):
30
Torsion (turns / m):
5
Fire:
IEC 60332-1 (USU2 only)

Temp - Operation:
-40°c to +70°c
Temp - Storage:
-40°c to +70°c
Temp - Installation:
-10°c to +70°c
Water Penetration:
<3m @ 24h

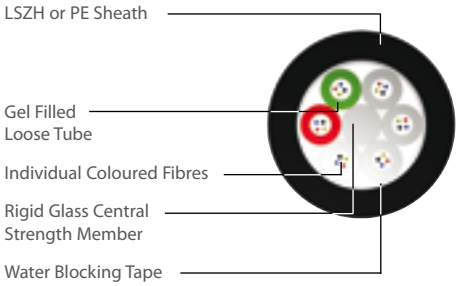
Tested in accordance with IEC 60794-1-2 unless stated

Brand-Rex Optical Cables - Universal MDU 01 and External MDE 01

Duct Grade Multi Loose Tube Cable

Product Data

	Diameter mm	Weight (U)/(E) kg / km	Max Tensile Load N	Min Static Bend mm	Min Dynamic Bend mm
4 - 24 Fibre	10.00	96/71	1500	100	150



Rigid Glass Central Strength Member
Choice of Universal or External Sheath
6 x 4 Fibres Per Tube
Offering Up To 24 Fibres
2.10mm Gel Filled Loose Tube

Product Part Numbering - MDU 01

	62.5/125	50/125	OM3	8/125
4 Fibre	HF 062 S4 W LU	HF 050 S4 W LU	HF OM3 S4 W LU	HF 008 S4 W LU
8 Fibre	HF 062 S8 W LU	HF 050 S8 W LU	HF OM3 S8 W LU	HF 008 S8 W LU
12 Fibre	HF 062 S12 W LU	HF 050 S12 W LU	HF OM3 S12 W LU	HF 008 S12 W LU
16 Fibre	HF 062 S16 W LU	HF 050 S16 W LU	HF OM3 S16 W LU	HF 008 S16 W LU
20 Fibre	HF 062 S20 W LU	HF 050 S20 W LU	HF OM3 S20 W LU	HF 008 S20 W LU
24 Fibre	HF 062 S24 W LU	HF 050 S24 W LU	HF OM3 S24 W LU	HF 008 S24 W LU

Product Part Numbering - MDE 01

	62.5/125	50/125	OM3	8/125
4 Fibre	HF 062 S4 W NM	HF 050 S4 W NM	HF OM3 S4 W NM	HF 008 S4 W NM
8 Fibre	HF 062 S8 W NM	HF 050 S8 W NM	HF OM3 S8 W NM	HF 008 S8 W NM
12 Fibre	HF 062 S12 W NM	HF 050 S12 W NM	HF OM3 S12 W NM	HF 008 S12 W NM
16 Fibre	HF 062 S16 W NM	HF 050 S16 W NM	HF OM3 S16 W NM	HF 008 S16 W NM
20 Fibre	HF 062 S20 W NM	HF 050 S20 W NM	HF OM3 S20 W NM	HF 008 S20 W NM
24 Fibre	HF 062 S24 W NM	HF 050 S24 W NM	HF OM3 S24 W NM	HF 008 S24 W NM

Fibre Selection

062 H62 | 050 H50 | OM3 Z50 | 008 D08

PRODUCT DESCRIPTION:

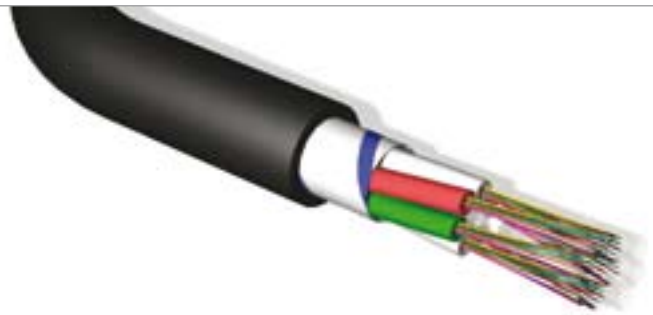
For applications where a higher tensile load is required versus that offered by unitube constructions, the universal product range offers compact low fibre count duct grade cable. The product range consists of multiple loose tubes containing up to 4 fibres and solid fillers where required, stranded around a rigid glass non metallic central strength member. A layer of water blocking tape provides interstitial water blocking.

PRODUCT PERFORMANCE:

Crush (N):
2500
Impact (Nm):
25
Torsion (turns / m):
5
Fire:
IEC 60332-1
(MDU only)

Temp - Operation:
-40°c to +70°c
Temp - Storage:
-40°c to +70°c
Temp - Installation:
-10°c to +70°c
Water Penetration:
<3m @ 24h

Tested in accordance with IEC 60794-1-2 unless stated

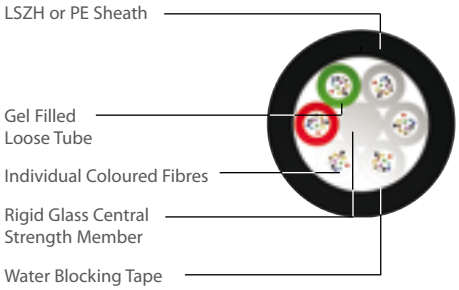


Brand-Rex Optical Cables - Universal MDU 02 and External MDE 02

Universal Duct Grade Multi Loose Tube Cable

Product Data

	Diameter mm	Weight (U)/(E) kg / km	Max Tensile Load N	Min Static Bend mm	Min Dynamic Bend mm
12 - 72 Fibre	11.20	118/90	2000	112	168



Rigid Glass Central Strength Member

Choice of Universal or External Sheath

6 x 12 Fibres Per Tube Offering up to 72 Fibres

2.50mm Gel Filled Loose Tube

Product Part Numbering - MDU 02

	62.5/125	50/125	OM3	8/125
12 Fibre	HF 062 S12 W LU	HF 050 S12 W LU	HF OM3 S12 W LU	HF 008 S12 W LU
24 Fibre	HF 062 S24 W LU	HF 050 S24 W LU	HF OM3 S24 W LU	HF 008 S24 W LU
36 Fibre	HF 062 S36 W LU	HF 050 S36 W LU	HF OM3 S36 W LU	HF 008 S36 W LU
48 Fibre	HF 062 S48 W LU	HF 050 S48 W LU	HF OM3 S48 W LU	HF 008 S48 W LU
60 Fibre	HF 062 S60 W LU	HF 050 S60 W LU	HF OM3 S60 W LU	HF 008 S60 W LU
72 Fibre	HF 062 S72 W LU	HF 050 S72 W LU	HF OM3 S72 W LU	HF 008 S72 W LU

Product Part Numbering - MDE 02

	62.5/125	50/125	OM3	8/125
12 Fibre	HF 062 S12 W NM	HF 050 S12 W NM	HF OM3 S12 W NM	HF 008 S12 W NM
24 Fibre	HF 062 S24 W NM	HF 050 S24 W NM	HF OM3 S24 W NM	HF 008 S24 W NM
36 Fibre	HF 062 S36 W NM	HF 050 S36 W NM	HF OM3 S36 W NM	HF 008 S36 W NM
48 Fibre	HF 062 S48 W NM	HF 050 S48 W NM	HF OM3 S48 W NM	HF 008 S48 W NM
60 Fibre	HF 062 S60 W NM	HF 050 S60 W NM	HF OM3 S60 W NM	HF 008 S60 W NM
72 Fibre	HF 062 S72 W NM	HF 050 S72 W NM	HF OM3 S72 W NM	HF 008 S72 W NM

Fibre Selection

062 H62 | 050 H50 | OM3 Z50 | 008 D08

PRODUCT DESCRIPTION:

For building and campus backbone applications where higher fibre counts are required, the product range offers a compact duct grade cable. The product range consists of multiple loose tubes containing up to 12 fibres and solid fillers where required, stranded around a rigid glass non metallic central strength member. A layer of water blocking tape provides interstitial water blocking.

PRODUCT PERFORMANCE:

Crush (N):
2500
Impact (Nm):
25
Torsion (turns / m):
5
Fire:
IEC 60332-1
(MDU only)

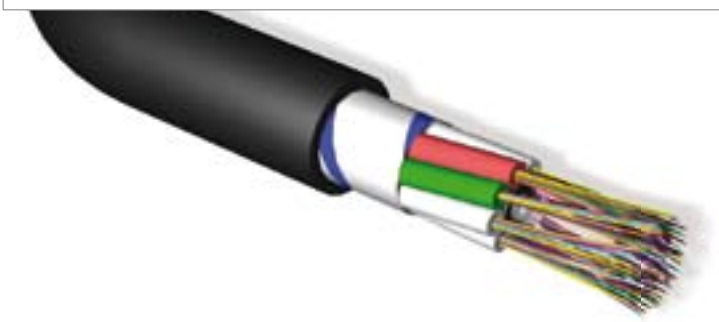
Temp - Operation:
-40°c to +70°c

Temp - Storage:
-40°c to +70°c

Temp - Installation:
-10°c to +70°c

Water Penetration:
<3m @ 24h

Tested in accordance with IEC 60794-1-2 unless stated



Brand-Rex Optical Cables - Universal MDU 04 and External MDE 04

Universal Duct Grade Multi Loose Tube Cable

Product Data

	Diameter mm	Weight (U)/(E) kg / km	Max Tensile Load N	Min Static Bend mm	Min Dynamic Bend mm
12 - 96 Fibre	12.60	150/118	3000	126	189

Product Part Numbering - MDU 04

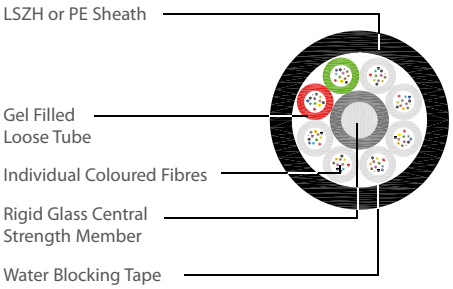
	62.5/125	50/125	OM3	8/125
12 Fibre	HF 062 S12 W LU	HF 050 S12 W LU	HF OM3 S12 W LU	HF 008 S12 W LU
24 Fibre	HF 062 S24 W LU	HF 050 S24 W LU	HF OM3 S24 W LU	HF 008 S24 W LU
36 Fibre	HF 062 S36 W LU	HF 050 S36 W LU	HF OM3 S36 W LU	HF 008 S36 W LU
48 Fibre	HF 062 S48 W LU	HF 050 S48 W LU	HF OM3 S48 W LU	HF 008 S48 W LU
60 Fibre	HF 062 S60 W LU	HF 050 S60 W LU	HF OM3 S60 W LU	HF 008 S60 W LU
72 Fibre	HF 062 S72 W LU	HF 050 S72 W LU	HF OM3 S72 W LU	HF 008 S72 W LU
84 Fibre	HF 062 S84 W LU	HF 050 S84 W LU	HF OM3 S84 W LU	HF 008 S84 W LU
96 Fibre	HF 062 S96 W LU	HF 050 S96 W LU	HF OM3 S96 W LU	HF 008 S96 W LU

Product Part Numbering - MDE 04

	62.5/125	50/125	OM3	8/125
12 Fibre	HF 062 S12 W NM	HF 050 S12 W NM	HF OM3 S12 W NM	HF 008 S12 W NM
24 Fibre	HF 062 S24 W NM	HF 050 S24 W NM	HF OM3 S24 W NM	HF 008 S24 W NM
36 Fibre	HF 062 S36 W NM	HF 050 S36 W NM	HF OM3 S36 W NM	HF 008 S36 W NM
48 Fibre	HF 062 S48 W NM	HF 050 S48 W NM	HF OM3 S48 W NM	HF 008 S48 W NM
60 Fibre	HF 062 S60 W NM	HF 050 S60 W NM	HF OM3 S60 W NM	HF 008 S60 W NM
72 Fibre	HF 062 S72 W NM	HF 050 S72 W NM	HF OM3 S72 W NM	HF 008 S72 W NM
84 Fibre	HF 062 S84 W NM	HF 050 S84 W NM	HF OM3 S84 W NM	HF 008 S84 W NM
96 Fibre	HF 062 S96 W NM	HF 050 S96 W NM	HF OM3 S96 W NM	HF 008 S96 W NM

Fibre Selection

062 H62 | 050 H50 | OM3 Z50 | 008 D08



Rigid Glass Central Strength Member

Choice of Universal or External Sheath

8 x 12 Fibres Per Tube Offering up to 96 Fibres

2.50mm Gel Filled Loose Tube

PRODUCT DESCRIPTION:

For building and campus backbone applications where higher fibre counts are required, the product range offers a compact duct grade cable. The product range consists of multiple loose tubes containing up to 12 fibres and solid fillers where required, stranded around a rigid glass non metallic central strength member. A layer of water blocking tape provides interstitial water blocking.

PRODUCT PERFORMANCE:

Crush (N):
2500
Impact (Nm):
25
Torsion (turns / m):
5
Fire:
IEC 60332-1
(MDU only)

Temp - Operation:
-40°c to +70°c

Temp - Storage:
-40°c to +70°c

Temp - Installation:
-10°c to +70°c

Water Penetration:
<3m @ 24h

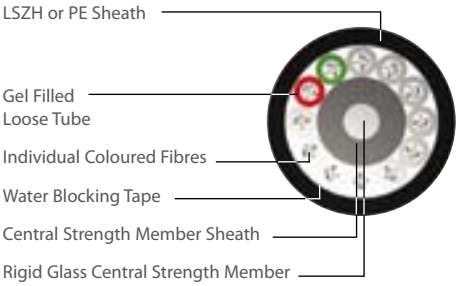
Tested in accordance with IEC 60794-1-2 unless stated

Brand-Rex Optical Cables - Universal MDU 03 and External MDE 03

Duct Grade Multi Loose Tube Cable

Product Data

	Diameter mm	Weight (U)/(E) kg / km	Max Tensile Load N	Min Static Bend mm	Min Dynamic Bend mm
96 - 144 Fibre	16.00	222/180	2000	160	240



Rigid Glass Central Strength Member

Choice of Universal or External Sheath

12 x 12 Fibres Per Tube Offering up to 144 Fibres

2.50mm Gel Filled Loose Tube

Product Part Numbering - MDU 03

	62.5/125	50/125	OM3	8/125
96 Fibre	HF 062 S96 W LU	HF 050 S96 W LU	HF OM3 S96 W LU	HF 008 S96 W LU
108 Fibre	HF 062 S108 W LU	HF 050 S108 W LU	HF OM3 108 W LU	HF 008 S108 W LU
120 Fibre	HF 062 S120 W LU	HF 050 S120 W LU	HF OM3 S120 W LU	HF 008 S120 W LU
132 Fibre	HF 062 S132 W LU	HF 050 S132 W LU	HF OM3 S132 W LU	HF 008 S132 W LU
144 Fibre	HF 062 S144 W LU	HF 050 S144 W LU	HF OM3 S144 W LU	HF 008 S144 W LU

Product Part Numbering - MDE 03

	62.5/125	50/125	OM3	8/125
96 Fibre	HF 062 S96 W NM	HF 050 S96 W NM	HF OM3 S96 W NM	HF 008 S96 W NM
108 Fibre	HF 062 S108 W NM	HF 050 S108 W NM	HF OM3 108 W NM	HF 008 S108 W NM
120 Fibre	HF 062 S120 W NM	HF 050 S120 W NM	HF OM3 S120 W NM	HF 008 S120 W NM
132 Fibre	HF 062 S132 W NM	HF 050 S132 W NM	HF OM3 S132 W NM	HF 008 S132 W NM
144 Fibre	HF 062 S144 W NM	HF 050 S144 W NM	HF OM3 S144 W NM	HF 008 S144 W NM

Fibre Selection

062 H62 | 050 H50 | OM3 Z50 | 008 D08

PRODUCT DESCRIPTION:

For higher fibre count building and campus backbone applications the product range delivers up to 144 fibres in a compact duct grade construction. The product range consists of multiple 2.50mm loose tubes containing up to 12 fibres and solid fillers where required, stranded around a sheathed rigid glass non metallic central strength member. A layer of water blocking tape provides interstitial water blocking.

PRODUCT PERFORMANCE:

Crush (N):
2500
Impact (Nm):
25
Torsion (turns / m):
5
Fire:
IEC 60332-1
(MDU only)

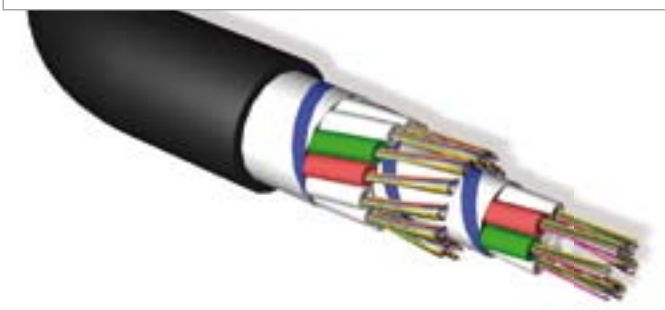
Temp - Operation:
-40°c to +70°c

Temp - Storage:
-40°c to +70°c

Temp - Installation:
-10°c to +70°c

Water Penetration:
<3m @ 24h

Tested in accordance with IEC 60794-1-2 unless stated



Brand-Rex Optical Cables - Universal MDU 05 and External MDE 05

Duct Grade Multi Loose Tube Cable

Product Data

	Diameter mm	Weight (U)/(E) kg / km	Max Tensile Load N	Min Static Bend mm	Min Dynamic Bend mm
144 - 216 Fibre	16.50	220/177	2000	165	248

Product Part Numbering - MDU 05

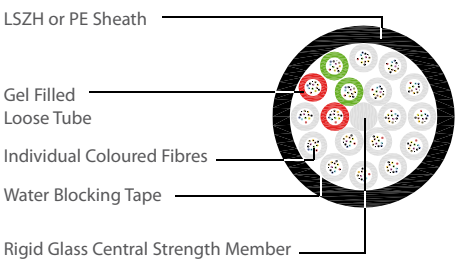
	62.5/125	50/125	OM3	8/125
144 Fibre	HF 062 S144 W LU	HF 050 S144 W LU	HF OM3 S144 W LU	HF 008 S144 W LU
156 Fibre	HF 062 S156 W LU	HF 050 S156 W LU	HF OM3 S156 W LU	HF 008 S156 W LU
168 Fibre	HF 062 S168 W LU	HF 050 S168 W LU	HF OM3 S168 W LU	HF 008 S168 W LU
180 Fibre	HF 062 S180 W LU	HF 050 S180 W LU	HF OM3 S180 W LU	HF 008 S180 W LU
192 Fibre	HF 062 S192 W LU	HF 050 S192 W LU	HF OM3 S192 W LU	HF 008 S192 W LU
204 Fibre	HF 062 S204 W LU	HF 050 S204 W LU	HF OM3 S204 W LU	HF 008 S204 W LU
216 Fibre	HF 062 S216 W LU	HF 050 S216 W LU	HF OM3 S216 W LU	HF 008 S216 W LU

Product Part Numbering - MDE 05

	62.5/125	50/125	OM3	8/125
144 Fibre	HF 062 S144 W NM	HF 050 S144 W NM	HF OM3 S144 W NM	HF 008 S144 W NM
156 Fibre	HF 062 S156 W NM	HF 050 S156 W NM	HF OM3 156 W NM	HF 008 S156 W NM
168 Fibre	HF 062 S168 W NM	HF 050 S168 W NM	HF OM3 S168 W NM	HF 008 S168 W NM
180 Fibre	HF 062 S180 W NM	HF 050 S180 W NM	HF OM3 S180 W NM	HF 008 S180 W NM
192 Fibre	HF 062 S192 W NM	HF 050 S192 W NM	HF OM3 S192 W NM	HF 008 S192 W NM
204 Fibre	HF 062 S204 W NM	HF 050 S204 W NM	HF OM3 S204 W NM	HF 008 S204 W NM
216 Fibre	HF 062 S216 W NM	HF 050 S216 W NM	HF OM3 S216 W NM	HF 008 S216 W NM

Fibre Selection

062 H62 | 050 H50 | OM3 Z50 | 008 D08



Rigid Glass Central Strength Member

Choice of Universal or External Sheath

18 x 12 Fibres Per Tube Offering up to 216 Fibres

2.50mm Gel Filled Loose Tube

PRODUCT DESCRIPTION:

For higher fibre count building and campus backbone applications the product range delivers up to 216 fibres in a compact duct grade construction. The product range consists of multiple 2.50mm loose tubes containing up to 12 fibres and solid fillers where required, stranded around a sheathed rigid glass non metallic central strength member. A layer of water blocking tape provides interstitial water blocking.

PRODUCT PERFORMANCE:

Crush (N):
2500
Impact (Nm):
25
Torsion (turns / m):
5
Fire:
IEC 60332-1
(MDU only)

Temp - Operation:
-40°c to +70°c
Temp - Storage:
-40°c to +70°c
Temp - Installation:
-10°c to +70°c
Water Penetration:
<3m @ 24h

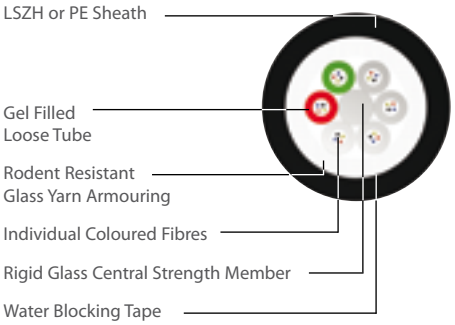
Tested in accordance with IEC 60794-1-2 unless stated

Brand-Rex Optical Cables - Universal MRU 01 and External MRE 01

Glass Yarn Armoured Rodent Resistant Multi Loose Tube Cable

Product Data

	Diameter mm	Weight (U)/(E) kg / km	Max Tensile Load N	Min Static Bend mm	Min Dynamic Bend mm
4 - 24 Fibre	12.00	149/118	9000	120	180


LSZH or PE Sheath
Gel Filled Loose Tube
Rodent Resistant Glass Yarn Armouring
Individual Coloured Fibres
Rigid Glass Central Strength Member
Water Blocking Tape

Glass Yarn Armouring for Rodent Resistance

Rigid Glass Central Strength Member

Choice of Universal or External Sheath

2.10mm Gel Filled Loose Tube

Product Part Numbering - MRU 01

	62.5/125	50/125	OM3	8/125
4 Fibre	HF 062 S4 W (E) LU	HF 050 S4 W (E) LU	HF OM3 S4 W (E) LU	HF 008 S4 W (E) LU
8 Fibre	HF 062 S8 W (E) LU	HF 050 S8 W (E) LU	HF OM3 S8 W (E) LU	HF 008 S8 W (E) LU
12 Fibre	HF 062 S12 W (E) LU	HF 050 S12 W (E) LU	HF OM3 S12 W (E) LU	HF 008 S12 W (E) LU
16 Fibre	HF 062 S16 W (E) LU	HF 050 S16 W (E) LU	HF OM3 S16 W (E) LU	HF 008 S16 W (E) LU
20 Fibre	HF 062 S20 W (E) LU	HF 050 S20 W (E) LU	HF OM3 S20 W (E) LU	HF 008 S20 W (E) LU
24 Fibre	HF 062 S24 W (E) LU	HF 050 S24 W (E) LU	HF OM3 S24 W (E) LU	HF 008 S24 W (E) LU

Product Part Numbering - MRE 01

	62.5/125	50/125	OM3	8/125
4 Fibre	HF 062 S4 W (E) NM	HF 050 S4 W (E) NM	HF OM3 S4 W (E) NM	HF 008 S4 W (E) NM
8 Fibre	HF 062 S8 W (E) NM	HF 050 S8 W (E) NM	HF OM3 S8 W (E) NM	HF 008 S8 W (E) NM
12 Fibre	HF 062 S12 W (E) NM	HF 050 S12 W (E) NM	HF OM3 S12 W (E) NM	HF 008 S12 W (E) NM
16 Fibre	HF 062 S16 W (E) NM	HF 050 S16 W (E) NM	HF OM3 S16 W (E) NM	HF 008 S16 W (E) NM
20 Fibre	HF 062 S20 W (E) NM	HF 050 S20 W (E) NM	HF OM3 S20 W (E) NM	HF 008 S20 W (E) NM
24 Fibre	HF 062 S24 W (E) NM	HF 050 S24 W (E) NM	HF OM3 S24 W (E) NM	HF 008 S24 W (E) NM

Fibre Selection

062 H62 | 050 H50 | OM3 Z50 | 008 D08

PRODUCT DESCRIPTION:

For applications where protection from rodent attack is required and a higher tensile load is required, exists the universal MRR product range offers rodent protection in the form of glass roving armour which deters rodents from chewing on optical cables. The product range consists of multiple 2.10mm loose tubes containing up to 4 fibres and solid fillers where required, stranded around a rigid glass non metallic central strength member. A layer of water blocking tape provides interstitial water blocking.

PRODUCT PERFORMANCE:

Crush (N):
3000
Impact (Nm):
30
Torsion (turns / m):
5
Fire:
IEC 60332-1
(MRU only)

Temp - Operation:
-40°c to +70°c

Temp - Storage:
-40°c to +70°c

Temp - Installation:
-10°c to +70°c

Water Penetration:
<3m @ 24h

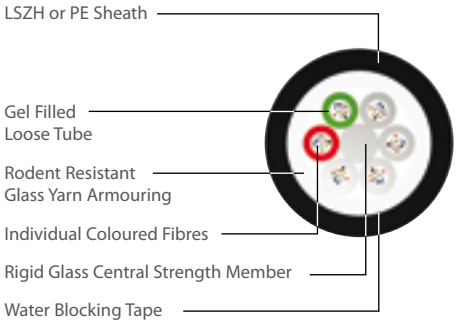
Tested in accordance with IEC 60794-1-2 unless stated

Brand-Rex Optical Cables - Universal MRU 02 and External MRE 02

Glass Yarn Armoured Rodent Resistant Multi Loose Tube Cable

Product Data

	Diameter mm	Weight (U)/(E) kg / km	Max Tensile Load N	Min Static Bend mm	Min Dynamic Bend mm
12 - 72 Fibre	13.00	171/137	9500	130	195


LSZH or PE Sheath
Gel Filled Loose Tube
Rodent Resistant Glass Yarn Armouring
Individual Coloured Fibres
Rigid Glass Central Strength Member
Water Blocking Tape

Glass Yarn Armouring for Rodent Resistance

Rigid Glass Central Strength Member

Choice of Universal or External Sheath

2.50mm Gel Filled Loose Tube

Product Part Numbering - MRU 02

	62.5/125	50/125	OM3	8/125
12 Fibre	HF 062 S12 W (E) LU	HF 050 S12 W (E) LU	HF OM3 S12 W (E) LU	HF 008 S12 W (E) LU
24 Fibre	HF 062 S24 W (E) LU	HF 050 S24 W (E) LU	HF OM3 S24 W (E) LU	HF 008 S24 W (E) LU
36 Fibre	HF 062 S36 W (E) LU	HF 050 S36 W (E) LU	HF OM3 S36 W (E) LU	HF 008 S36 W (E) LU
48 Fibre	HF 062 S48 W (E) LU	HF 050 S48 W (E) LU	HF OM3 S48 W (E) LU	HF 008 S48 W (E) LU
60 Fibre	HF 062 S60 W (E) LU	HF 050 S60 W (E) LU	HF OM3 S60 W (E) LU	HF 008 S60 W (E) LU
72 Fibre	HF 062 S72 W (E) LU	HF 050 S72 W (E) LU	HF OM3 S72 W (E) LU	HF 008 S72 W (E) LU

Product Part Numbering - MRE 02

	62.5/125	50/125	OM3	8/125
12 Fibre	HF 062 S12 W (E) NM	HF 050 S12 W (E) NM	HF OM3 S12 W (E) NM	HF 008 S12 W (E) NM
24 Fibre	HF 062 S24 W (E) NM	HF 050 S24 W (E) NM	HF OM3 S24 W (E) NM	HF 008 S24 W (E) NM
36 Fibre	HF 062 S36 W (E) NM	HF 050 S36 W (E) NM	HF OM3 S36 W (E) NM	HF 008 S36 W (E) NM
48 Fibre	HF 062 S48 W (E) NM	HF 050 S48 W (E) NM	HF OM3 S48 W (E) NM	HF 008 S48 W (E) NM
60 Fibre	HF 062 S60 W (E) NM	HF 050 S60 W (E) NM	HF OM3 S60 W (E) NM	HF 008 S60 W (E) NM
72 Fibre	HF 062 S72 W (E) NM	HF 050 S72 W (E) NM	HF OM3 S72 W (E) NM	HF 008 S72 W (E) NM

Fibre Selection

062 H62 | 050 H50 | OM3 Z50 | 008 D08

PRODUCT DESCRIPTION:

For applications where protection from rodent attack and higher fibre counts are required, the universal product range offers rodent protection in the form of glass roving armour which deters rodents from chewing on optical cables.
The product range consists of multiple 2.50mm loose tubes containing up to 12 fibres and solid fillers where required, stranded around a rigid glass non metallic central strength member.
A layer of water blocking tape provides interstitial water blocking.

PRODUCT PERFORMANCE:

Crush (N):
3000
Impact (Nm):
30
Torsion (turns / m):
5
Fire:
IEC 60332-1
(MRU only)

Temp - Operation:
-40°c to +70°c

Temp - Storage:
-40°c to +70°c

Temp - Installation:
-10°c to +70°c

Water Penetration:
<3m @ 24h

Tested in accordance with IEC 60794-1-2 unless stated

Brand-Rex Optical Cables - Universal MRU 04 and External MRE 04

Glass Yarn Armoured Rodent Resistant Multi Loose Tube Cable

Product Data

	Diameter mm	Weight (U)/(E) kg / km	Max Tensile Load N	Min Static Bend mm	Min Dynamic Bend mm
12 - 96 Fibre	14.20	200/164	9500	142	213

Product Part Numbering - MRU 04

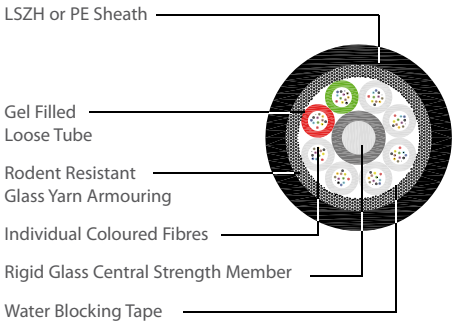
	62.5/125	50/125	OM3	8/125
12 Fibre	HF 062 S12 W (E) LU	HF 050 S12 W (E) LU	HF OM3 S12 W (E) LU	HF 008 S12 W (E) LU
24 Fibre	HF 062 S24 W (E) LU	HF 050 S24 W (E) LU	HF OM3 S24 W (E) LU	HF 008 S24 W (E) LU
36 Fibre	HF 062 S36 W (E) LU	HF 050 S36 W (E) LU	HF OM3 S36 W (E) LU	HF 008 S36 W (E) LU
48 Fibre	HF 062 S48 W (E) LU	HF 050 S48 W (E) LU	HF OM3 S48 W (E) LU	HF 008 S48 W (E) LU
60 Fibre	HF 062 S60 W (E) LU	HF 050 S60 W (E) LU	HF OM3 S60 W (E) LU	HF 008 S60 W (E) LU
72 Fibre	HF 062 S72 W (E) LU	HF 050 S72 W (E) LU	HF OM3 S72 W (E) LU	HF 008 S72 W (E) LU
84 Fibre	HF 062 S84 W (E) LU	HF 050 S84 W (E) LU	HF OM3 S84 W (E) LU	HF 008 S84 W (E) LU
96 Fibre	HF 062 S96 W (E) LU	HF 050 S96 W (E) LU	HF OM3 S96 W (E) LU	HF 008 S96 W (E) LU

Product Part Numbering - MRE 04

	62.5/125	50/125	OM3	8/125
12 Fibre	HF 062 S12 W (E) NM	HF 050 S12 W (E) NM	HF OM3 S12 W (E) NM	HF 008 S12 W (E) NM
24 Fibre	HF 062 S24 W (E) NM	HF 050 S24 W (E) NM	HF OM3 S24 W (E) NM	HF 008 S24 W (E) NM
36 Fibre	HF 062 S36 W (E) NM	HF 050 S36 W (E) NM	HF OM3 S36 W (E) NM	HF 008 S36 W (E) NM
48 Fibre	HF 062 S48 W (E) NM	HF 050 S48 W (E) NM	HF OM3 S48 W (E) NM	HF 008 S48 W (E) NM
60 Fibre	HF 062 S60 W (E) NM	HF 050 S60 W (E) NM	HF OM3 S60 W (E) NM	HF 008 S60 W (E) NM
72 Fibre	HF 062 S72 W (E) NM	HF 050 S72 W (E) NM	HF OM3 S72 W (E) NM	HF 008 S72 W (E) NM
84 Fibre	HF 062 S84 W (E) NM	HF 050 S84 W (E) NM	HF OM3 S84 W (E) NM	HF 008 S84 W (E) NM
96 Fibre	HF 062 S96 W (E) NM	HF 050 S96 W (E) NM	HF OM3 S96 W (E) NM	HF 008 S96 W (E) NM

Fibre Selection

062 H62 | 050 H50 | OM3 Z50 | 008 D08


LSZH or PE Sheath
Gel Filled Loose Tube
Rodent Resistant Glass Yarn Armouring
Individual Coloured Fibres
Rigid Glass Central Strength Member
Water Blocking Tape

Glass Yarn Armouring for Rodent Resistance

Rigid Glass Central Strength Member

Choice of Universal or External Sheath

2.50mm Gel Filled Loose Tube

PRODUCT DESCRIPTION:

For applications where protection from rodent attack and higher fibre counts are required, the universal product range offers rodent protection in the form of glass roving armour which deters rodents from chewing on optical cables. The product range consists of multiple 2.50mm loose tubes containing up to 12 fibres and solid fillers where required, stranded around a rigid glass non metallic central strength member. A layer of water blocking tape provides interstitial water blocking.

PRODUCT PERFORMANCE:

Crush (N):
3000
Impact (Nm):
30
Torsion (turns / m):
5
Fire:
IEC 60332-1
(MRU only)

Temp - Operation:
-40°c to +70°c
Temp - Storage:
-40°c to +70°c
Temp - Installation:
-10°c to +70°c
Water Penetration:
<3m @ 24h

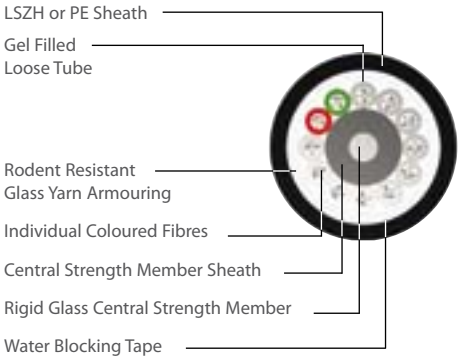
Tested in accordance with IEC 60794-1-2 unless stated

Brand-Rex Optical Cables - Universal MRU 03 and External MRE 03

Glass Yarn Armoured Rodent Resistant Multi Loose Tube Cable

Product Data

	Diameter mm	Weight (U)/(E) kg / km	Max Tensile Load N	Min Static Bend mm	Min Dynamic Bend mm
96 - 144 Fibre	17.40	279/230	10500	174	261


LSZH or PE Sheath
Gel Filled Loose Tube
Rodent Resistant Glass Yarn Armouring
Individual Coloured Fibres
Central Strength Member Sheath
Rigid Glass Central Strength Member
Water Blocking Tape

Glass Yarn Armouring for Rodent Resistance

Rigid Glass Central Strength Member

Choice of Universal or External Sheath

12 x 12 Fibres Per Tube Offering up to 144 Fibres

2.50mm Gel Filled Loose Tube

Product Part Numbering - MRU 03

	62.5/125	50/125	OM3	8/125
96 Fibre	HF 062 S96 W (E) LU	HF 050 S96 W (E) LU	HF OM3 S96 W (E) LU	HF 008 S96 W (E) LU
108 Fibre	HF 062 S108 W (E) LU	HF 050 S108 W (E) LU	HF OM3 S108 W (E) LU	HF 008 S108 W (E) LU
120 Fibre	HF 062 S120 W (E) LU	HF 050 S120 W (E) LU	HF OM3 S120 W (E) LU	HF 008 S120 W (E) LU
132 Fibre	HF 062 S132 W (E) LU	HF 050 S132 W (E) LU	HF OM3 S132 W (E) LU	HF 008 S132 W (E) LU
144 Fibre	HF 062 S144 W (E) LU	HF 050 S144 W (E) LU	HF OM3 S144 W (E) LU	HF 008 S144 W (E) LU

Product Part Numbering - MRE 03

	62.5/125	50/125	OM3	8/125
96 Fibre	HF 062 S96 W (E) NM	HF 050 S96 W (E) NM	HF OM3 S96 W (E) NM	HF 008 S96 W (E) NM
108 Fibre	HF 062 S108 W (E) NM	HF 050 S108 W (E) NM	HF OM3 S108 W (E) NM	HF 008 S108 W (E) NM
120 Fibre	HF 062 S120 W (E) NM	HF 050 S120 W (E) NM	HF OM3 S120 W (E) NM	HF 008 S120 W (E) NM
132 Fibre	HF 062 S132 W (E) NM	HF 050 S132 W (E) NM	HF OM3 S132 W (E) NM	HF 008 S132 W (E) NM
144 Fibre	HF 062 S144 W (E) NM	HF 050 S144 W (E) NM	HF OM3 S144 W (E) NM	HF 008 S144 W (E) NM

Fibre Selection

062 H62 | 050 H50 | OM3 Z50 | 008 D08

PRODUCT DESCRIPTION:

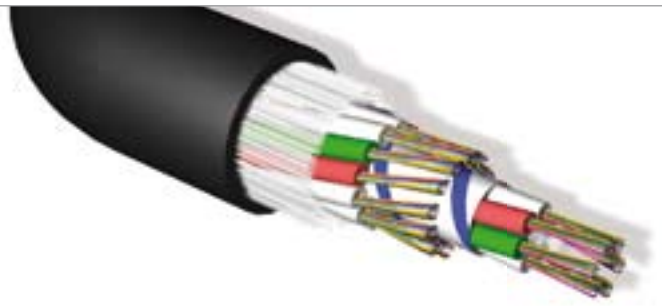
For applications where protection from rodent attack and higher fibre counts are required, the universal product range offers rodent protection in the form of glass roving armour that deters rodents from chewing on optical cables. The product range consists of multiple 2.50mm loose tubes containing up to 12 fibres and solid fillers where required, stranded around a sheathed rigid glass non metallic central strength member. A layer of water blocking tape provides interstitial water blocking.

PRODUCT PERFORMANCE:

Crush (N):
3000
Impact (Nm):
30
Torsion (turns / m):
5
Fire:
IEC 60332-1
(MRU only)

Temp - Operation:
-40°c to +70°c
Temp - Storage:
-40°c to +70°c
Temp - Installation:
-10°c to +70°c
Water Penetration:
<3m @ 24h

Tested in accordance with IEC 60794-1-2 unless stated



Brand-Rex Optical Cables - Universal MRU 05 and External MRE 05

Glass Yarn Armoured Rodent Resistant Multi Loose Tube Cable

Product Data

	Diameter mm	Weight (U)/(E) kg / km	Max Tensile Load N	Min Static Bend mm	Min Dynamic Bend mm
144 - 216 Fibre	18.20	294/250	10500	182	273

Product Part Numbering - MRU 05

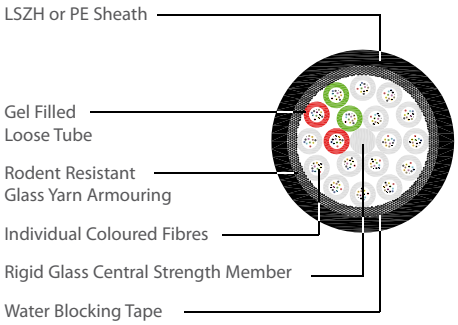
	62.5/125	50/125	OM3	8/125
144 Fibre	HF 062 S144 W (E) LU	HF 050 S144 W (E) LU	HF OM3 S144 W (E) LU	HF 008 S144 W (E) LU
156 Fibre	HF 062 S156 W (E) LU	HF 050 S156 W (E) LU	HF OM3 S156 W (E) LU	HF 008 S156 W (E) LU
168 Fibre	HF 062 S168 W (E) LU	HF 050 S168 W (E) LU	HF OM3 S168 W (E) LU	HF 008 S168 W (E) LU
180 Fibre	HF 062 S180 W (E) LU	HF 050 S180 W (E) LU	HF OM3 S180 W (E) LU	HF 008 S180 W (E) LU
192 Fibre	HF 062 S192 W (E) LU	HF 050 S192 W (E) LU	HF OM3 S192 W (E) LU	HF 008 S192 W (E) LU
204 Fibre	HF 062 S204 W (E) LU	HF 050 S204 W (E) LU	HF OM3 S204 W (E) LU	HF 008 S204 W (E) LU
216 Fibre	HF 062 S216 W (E) LU	HF 050 S216 W (E) LU	HF OM3 S216 W (E) LU	HF 008 S216 W (E) LU

Product Part Numbering - MRE 05

	62.5/125	50/125	OM3	8/125
144 Fibre	HF 062 S96 W (E) NM	HF 050 S96 W (E) NM	HF OM3 S96 W (E) NM	HF 008 S96 W (E) NM
156 Fibre	HF 062 S108 W (E) NM	HF 050 S108 W (E) NM	HF OM3 S108 W (E) NM	HF 008 S108 W (E) NM
168 Fibre	HF 062 S120 W (E) NM	HF 050 S120 W (E) NM	HF OM3 S120 W (E) NM	HF 008 S120 W (E) NM
180 Fibre	HF 062 S132 W (E) NM	HF 050 S132 W (E) NM	HF OM3 S132 W (E) NM	HF 008 S132 W (E) NM
192 Fibre	HF 062 S144 W (E) NM	HF 050 S144 W (E) NM	HF OM3 S144 W (E) NM	HF 008 S144 W (E) NM
204 Fibre	HF 062 S204 W (E) NM	HF 050 S204 W (E) NM	HF OM3 S204 W (E) NM	HF 008 S204 W (E) NM
216 Fibre	HF 062 S216 W (E) NM	HF 050 S216 W (E) NM	HF OM3 S216 W (E) NM	HF 008 S216 W (E) NM

Fibre Selection

062 H62 | 050 H50 | OM3 Z50 | 008 D08


LSZH or PE Sheath
Gel Filled Loose Tube
Rodent Resistant Glass Yarn Armouring
Individual Coloured Fibres
Rigid Glass Central Strength Member
Water Blocking Tape

Glass Yarn Armouring for Rodent Resistance

Rigid Glass Central Strength Member

Choice of Universal or External Sheath

18 x 12 Fibres Per Tube Offering up to 216 Fibres

2.50mm Gel Filled Loose Tube

PRODUCT DESCRIPTION:

For applications where protection from rodent attack and higher fibre counts are required, the universal product range offers rodent protection in the form of glass roving armour that deters rodents from chewing on optical cables. The product range consists of multiple 2.50mm loose tubes containing up to 12 fibres and solid fillers where required, stranded around a sheathed rigid glass non metallic central strength member. A layer of water blocking tape provides interstitial water blocking.

PRODUCT PERFORMANCE:

Crush (N):
3000
Impact (Nm):
30
Torsion (turns / m):
5
Fire:
IEC 60332-1
(MRU only)

Temp - Operation:
-40°c to +70°c
Temp - Storage:
-40°c to +70°c
Temp - Installation:
-10°c to +70°c
Water Penetration:
<3m @ 24h

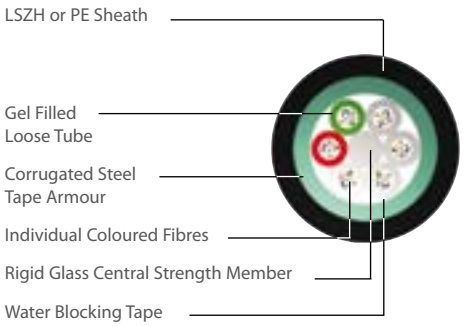
Tested in accordance with IEC 60794-1-2 unless stated

Brand-Rex Optical Cables - Universal MSU 01 and External MSE 01

Direct Burial Steel Tape Armoured Multi Loose Tube Cable

Product Data

	Diameter mm	Weight (U)/(E) kg / km	Max Tensile Load N	Min Static Bend mm	Min Dynamic Bend mm
4 - 24 Fibre	12.20	190 / 153	1500	122	183



Corrugated Steel Tape Armour

Rigid Glass Central Strength Member

Choice of Universal or External Sheath

6 x 4 Fibres Per Tube Offering up to 24 Fibres

2.10mm Gel Filled Loose Tube

Product Part Numbering - MSU 01

	62.5/125	50/125	OM3	8/125
4 Fibre	HF 062 S4 W STA LU	HF 050 S4 W STA LU	HF OM3 S4 W STA LU	HF 008 S4 W STA LU
8 Fibre	HF 062 S8 W STA LU	HF 050 S8 W STA LU	HF OM3 S8 W STA LU	HF 008 S8 W STA LU
12 Fibre	HF 062 S12 W STA LU	HF 050 S12 W STA LU	HF OM3 S12 W STA LU	HF 008 S12 W STA LU
16 Fibre	HF 062 S16 W STA LU	HF 050 S16 W STA LU	HF OM3 S16 W STA LU	HF 008 S16 W STA LU
20 Fibre	HF 062 S20 W STA LU	HF 050 S20 W STA LU	HF OM3 S20 W STA LU	HF 008 S20 W STA LU
24 Fibre	HF 062 S24 W STA LU	HF 050 S24 W STA LU	HF OM3 S24 W STA LU	HF 008 S24 W STA LU

Product Part Numbering - MSE 01

	62.5/125	50/125	OM3	8/125
4 Fibre	HF 062 S4 W STA NM	HF 050 S4 W STA NM	HF OM3 S4 W STA NM	HF 008 S4 W STA NM
8 Fibre	HF 062 S8 W STA NM	HF 050 S8 W STA NM	HF OM3 S8 W STA NM	HF 008 S8 W STA NM
12 Fibre	HF 062 S12 W STA NM	HF 050 S12 W STA NM	HF OM3 S12 W STA NM	HF 008 S12 W STA NM
16 Fibre	HF 062 S16 W STA NM	HF 050 S16 W STA NM	HF OM3 S16 W STA NM	HF 008 S16 W STA NM
20 Fibre	HF 062 S20 W STA NM	HF 050 S20 W STA NM	HF OM3 S20 W STA NM	HF 008 S20 W STA NM
24 Fibre	HF 062 S24 W STA NM	HF 050 S24 W STA NM	HF OM3 S24 W STA NM	HF 008 S24 W STA NM

Fibre Selection

062 H62 | 050 H50 | OM3 Z50 | 008 D08

PRODUCT DESCRIPTION:

For applications where a higher tensile load is required versus that offered by unitube constructions, this product range offers a compact low fibre count direct burial grade cable. The product range consists of multiple 2.10mm loose tubes containing up to 4 fibres and solid fillers where required, stranded around a rigid glass non metallic central strength member. A layer of water blocking tape provides interstitial water blocking and a layer of corrugated steel tape armour provides additional crush resistance.

PRODUCT PERFORMANCE:

Crush (N):
7500
Impact (Nm):
30
Torsion (turns / m):
5
Fire:
IEC 60332-1
(MSU only)

Temp - Operation:
-40°c to +70°c
Temp - Storage:
-40°c to +70°c
Temp - Installation:
-10°c to +70°c
Water Penetration:
<3m @ 24h

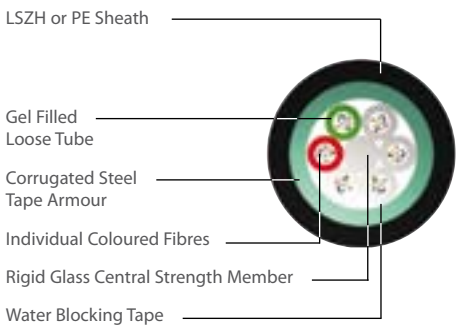
Tested in accordance with IEC 60794-1-2 unless stated

Brand-Rex Optical Cables - Universal MSU 02 and MSE 02

Direct Burial Steel Tape Armoured Multi Loose Tube Cable

Product Data

	Diameter mm	Weight (U)/(E) kg / km	Max Tensile Load N	Min Static Bend mm	Min Dynamic Bend mm
12 - 72 Fibre	13.40	227/185	2000	134	201



Corrugated Steel Tape Armour

Rigid Glass Central Strength Member

Choice of Universal or External Sheath

6 x 12 Fibres Per Tube Offering up to 72 Fibres

2.50mm Gel Filled Loose Tube

Product Part Numbering - MSU 02

	62.5/125	50/125	OM3	8/125
12 Fibre	HF 062 S12 W STA LU	HF 050 S12 W STA LU	HF OM3 S12 W STA LU	HF 008 S12 W STA LU
24 Fibre	HF 062 S24 W STA LU	HF 050 S24 W STA LU	HF OM3 S24 W STA LU	HF 008 S24 W STA LU
36 Fibre	HF 062 S36 W STA LU	HF 050 S36 W STA LU	HF OM3 S36 W STA LU	HF 008 S36 W STA LU
48 Fibre	HF 062 S48 W STA LU	HF 050 S48 W STA LU	HF OM3 S48 W STA LU	HF 008 S48 W STA LU
60 Fibre	HF 062 S60 W STA LU	HF 050 S60 W STA LU	HF OM3 S60 W STA LU	HF 008 S60 W STA LU
72 Fibre	HF 062 S72 W STA LU	HF 050 S72 W STA LU	HF OM3 S72 W STA LU	HF 008 S72 W STA LU

Product Part Numbering - MSE 02

	62.5/125	50/125	OM3	8/125
12 Fibre	HF 062 S12 W STA NM	HF 050 S12 W STA NM	HF OM3 S12 W STA NM	HF 008 S12 W STA NM
24 Fibre	HF 062 S24 W STA NM	HF 050 S24 W STA NM	HF OM3 S24 W STA NM	HF 008 S24 W STA NM
36 Fibre	HF 062 S36 W STA NM	HF 050 S36 W STA NM	HF OM3 S36 W STA NM	HF 008 S36 W STA NM
48 Fibre	HF 062 S48 W STA NM	HF 050 S48 W STA NM	HF OM3 S48 W STA NM	HF 008 S48 W STA NM
60 Fibre	HF 062 S60 W STA NM	HF 050 S60 W STA NM	HF OM3 S60 W STA NM	HF 008 S60 W STA NM
72 Fibre	HF 062 S72 W STA NM	HF 050 S72 W STA NM	HF OM3 S72 W STA NM	HF 008 S72 W STA NM

Fibre Selection

062 H62 | 050 H50 | OM3 Z50 | 008 D08

PRODUCT DESCRIPTION:

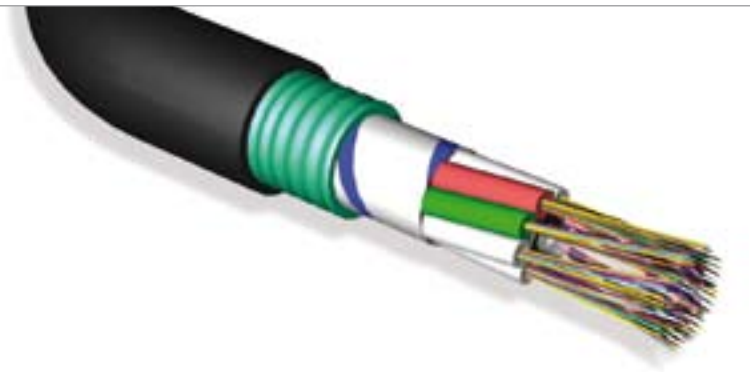
For direct burial applications, the single sheathed product range offers up to 72 fibres in a compact and relatively flexible construction. The product range consists of multiple 2.50mm loose tubes containing up to 12 fibres and solid fillers where required, stranded around a rigid glass non metallic central strength member.
A layer of water blocking tape provides interstitial water blocking and a layer of steel tape armour provides additional crush resistance.

PRODUCT PERFORMANCE:

Crush (N):
7500
Impact (Nm):
30
Torsion (turns / m):
5
Fire:
IEC 60332-1
(MSU only)

Temp - Operation:
-40°c to +70°c
Temp - Storage:
-40°c to +70°c
Temp - Installation:
-10°c to +70°c
Water Penetration:
<3m @ 24h

Tested in accordance with IEC 60794-1-2 unless stated



Brand-Rex Optical Cables - Universal MSU 04 and MSE 04

Direct Burial Steel Tape Armoured Multi Loose Tube Cable

Product Data

	Diameter mm	Weight (U)/(E) kg / km	Max Tensile Load N	Min Static Bend mm	Min Dynamic Bend mm
12-96 Fibre	14.70	258/210	3000	147	220

Product Part Numbering - MSU 04

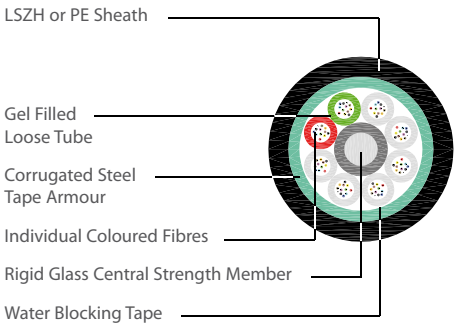
	62.5/125	50/125	OM3	8/125
12 Fibre	HF 062 S12 W STA LU	HF 050 S12 W STA LU	HF OM3 S12 W STA LU	HF 008 S12 W STA LU
24 Fibre	HF 062 S24 W STA LU	HF 050 S24 W STA LU	HF OM3 S24 W STA LU	HF 008 S24 W STA LU
36 Fibre	HF 062 S36 W STA LU	HF 050 S36 W STA LU	HF OM3 S36 W STA LU	HF 008 S36 W STA LU
48 Fibre	HF 062 S48 W STA LU	HF 050 S48 W STA LU	HF OM3 S48 W STA LU	HF 008 S48 W STA LU
60 Fibre	HF 062 S60 W STA LU	HF 050 S60 W STA LU	HF OM3 S60 W STA LU	HF 008 S60 W STA LU
72 Fibre	HF 062 S72 W STA LU	HF 050 S72 W STA LU	HF OM3 S72 W STA LU	HF 008 S72 W STA LU
84 Fibre	HF 062 S84 W STA LU	HF 050 S84 W STA LU	HF OM3 S84 W STA LU	HF 008 S84 W STA LU
96 Fibre	HF 062 S96 W STA LU	HF 050 S96 W STA LU	HF OM3 S96 W STA LU	HF 008 S96 W STA LU

Product Part Numbering - MSE 04

	62.5/125	50/125	OM3	8/125
12 Fibre	HF 062 S12 W STA NM	HF 050 S12 W STA NM	HF OM3 S12 W STA NM	HF 008 S12 W STA NM
24 Fibre	HF 062 S24 W STA NM	HF 050 S24 W STA NM	HF OM3 S24 W STA NM	HF 008 S24 W STA NM
36 Fibre	HF 062 S36 W STA NM	HF 050 S36 W STA NM	HF OM3 S36 W STA NM	HF 008 S36 W STA NM
48 Fibre	HF 062 S48 W STA NM	HF 050 S48 W STA NM	HF OM3 S48 W STA NM	HF 008 S48 W STA NM
60 Fibre	HF 062 S60 W STA NM	HF 050 S60 W STA NM	HF OM3 S60 W STA NM	HF 008 S60 W STA NM
72 Fibre	HF 062 S72 W STA NM	HF 050 S72 W STA NM	HF OM3 S72 W STA NM	HF 008 S72 W STA NM
84 Fibre	HF 062 S84 W STA NM	HF 050 S84 W STA NM	HF OM3 S84 W STA NM	HF 008 S84 W STA NM
96 Fibre	HF 062 S96 W STA NM	HF 050 S96 W STA NM	HF OM3 S96 W STA NM	HF 008 S96 W STA NM

Fibre Selection

062 H62 | 050 H50 | OM3 Z50 | 008 D08



Corrugated Steel Tape Armour

Rigid Glass Central Strength Member

Choice of Universal or External Sheath

8 x 12 Fibres Per Tube Offering up to 96 Fibres

2.50mm Gel Filled Loose Tube

PRODUCT DESCRIPTION:

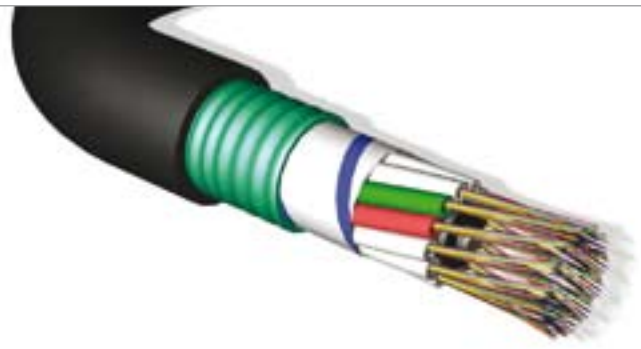
For direct burial applications, the single sheathed product range offers up to 96 fibres in a compact and relatively flexible construction. The product range consists of multiple 2.50mm loose tubes containing up to 12 fibres and solid fillers where required, stranded around a rigid glass non metallic central strength member.
A layer of water blocking tape provides interstitial water blocking and a layer of steel tape armour provides additional crush resistance.

PRODUCT PERFORMANCE:

Crush (N):
7500
Impact (Nm):
30
Torsion (turns / m):
5
Fire:
IEC 60332-1
(MSU only)

Temp - Operation:
-40°c to +70°c
Temp - Storage:
-40°c to +70°c
Temp - Installation:
-10°c to +70°c
Water Penetration:
<3m @ 24h

Tested in accordance with IEC 60794-1-2 unless stated

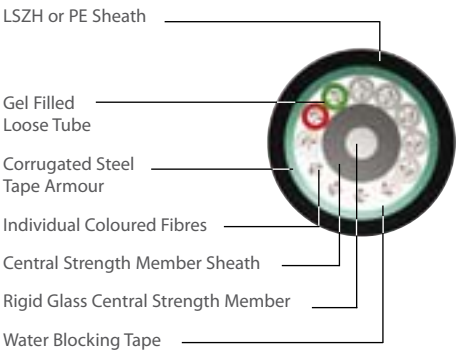


Brand-Rex Optical Cables - Universal MSU 03 and External MSE 03

Direct Burial Steel Tape Armoured Multi Loose Tube cable

Product Data

	Diameter mm	Weight (U)/(E) kg / km	Max Tensile Load N	Min Static Bend mm	Min Dynamic Bend mm
96 - 144 Fibre	18.20	327/313	2000	182	273



Corrugated Steel Tape Armour

Rigid Glass Central Strength Member

Choice of Universal or External Sheath

12 x 12 Fibres Per Tube Offering up to 144 Fibres

2.50mm Gel Filled Loose Tube

Product Part Numbering - MSU 03

	62.5/125	50/125	OM3	8/125
96 Fibre	HF 062 S96 W STA LU	HF 050 S96 W STA LU	HF OM3 S96 W STA LU	HF 008 S96 W STA LU
108 Fibre	HF 062 S108 W STA LU	HF 050 S108 W STA LU	HF OM3 S108 W STA LU	HF 008 S108 W STA LU
120 Fibre	HF 062 S120 W STA LU	HF 050 S120 W STA LU	HF OM3 S120 W STA LU	HF 008 S120 W STA LU
132 Fibre	HF 062 S132 W STA LU	HF 050 S132 W STA LU	HF OM3 S132 W STA LU	HF 008 S132 W STA LU
144 Fibre	HF 062 S144 W STA LU	HF 050 S144 W STA LU	HF OM3 S144 W STA LU	HF 008 144 W STA LU

Product Part Numbering - MSE 03

	62.5/125	50/125	OM3	8/125
96 Fibre	HF 062 S96 W STA NM	HF 050 S96 W STA NM	HF OM3 S96 W STA NM	HF 008 S96 W STA NM
108 Fibre	HF 062 S108 W STA NM	HF 050 S108 W STA NM	HF OM3 S108 W STA NM	HF 008 S108 W STA NM
120 Fibre	HF 062 S120 W STA NM	HF 050 S120 W STA NM	HF OM3 S120 W STA NM	HF 008 S120 W STA NM
132 Fibre	HF 062 S132 W STA NM	HF 050 S132 W STA NM	HF OM3 S132 W STA NM	HF 008 S132 W STA NM
144 Fibre	HF 062 S144 W STA NM	HF 050 S144 W STA NM	HF OM3 S144 W STA NM	HF 008 144 W STA NM

Fibre Selection

062 H62 | 050 H50 | OM3 Z50 | 008 D08

PRODUCT DESCRIPTION:

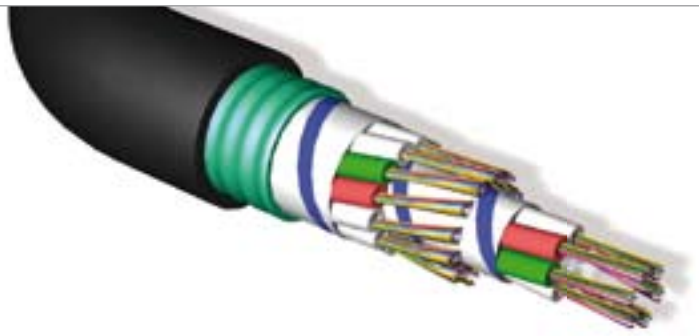
For direct burial applications, the single sheathed product range offers up to 144 fibres in a compact and relatively flexible construction.
The product range consists of multiple 2.50mm loose tubes containing up to 12 fibres and solid fillers where required, stranded around a sheathed rigid glass non metallic central strength member.
A layer of water blocking tape provides interstitial water blocking and a layer of corrugated steel tape armour gives additional crush resistance.

PRODUCT PERFORMANCE:

Crush (N):
7500
Impact (Nm):
30
Torsion (turns / m):
5
Fire:
IEC 60332-1
(MSU only)

Temp - Operation:
-40°c to +70°c
Temp - Storage:
-40°c to +70°c
Temp - Installation:
-10°c to +70°c
Water Penetration:
<3m @ 24h

Tested in accordance with IEC 60794-1-2 unless stated

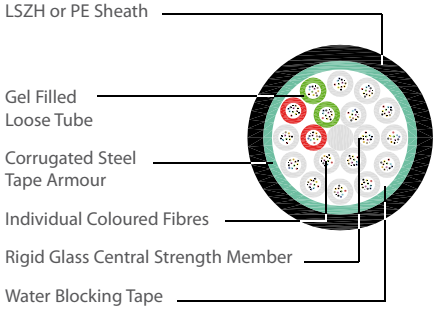


Brand-Rex Optical Cables - Universal MSU 05 and External MSE 05

Direct Burial Steel Tape Armoured Multi Loose Tube cable

Product Data

	Diameter mm	Weight (U)/(E) kg / km	Max Tensile Load N	Min Static Bend mm	Min Dynamic Bend mm
144-216 Fibre	19.00	352/303	2000	190	285



Product Part Numbering - MSU 05

	62.5/125	50/125	OM3	8/125
144 Fibre	HF 062 S144 W STA LU	HF 050 S144 W STA LU	HF OM3 S144 W STA LU	HF 008 S144 W STA LU
156 Fibre	HF 062 S156 W STA LU	HF 050 S156 W STA LU	HF OM3 S156 W STA LU	HF 008 S156 W STA LU
168 Fibre	HF 062 S168 W STA LU	HF 050 S168 W STA LU	HF OM3 S168 W STA LU	HF 008 S168 W STA LU
180 Fibre	HF 062 S180 W STA LU	HF 050 S180 W STA LU	HF OM3 S180 W STA LU	HF 008 S180 W STA LU
192 Fibre	HF 062 S192 W STA LU	HF 050 S192 W STA LU	HF OM3 S192 W STA LU	HF 008 S192 W STA LU
204 Fibre	HF 062 S204 W STA LU	HF 050 S204 W STA LU	HF OM3 S204 W STA LU	HF 008 S204 W STA LU
216 Fibre	HF 062 S216 W STA LU	HF 050 S216 W STA LU	HF OM3 S216 W STA LU	HF 008 S216 W STA LU

Product Part Numbering - MSE 05

	62.5/125	50/125	OM3	8/125
144Fibre	HF 062 S144 W STA NM	HF 050 S144 W STA NM	HF OM3 S144 W STA NM	HF 008 S144 W STA NM
156 Fibre	HF 062 S156 W STA NM	HF 050 S156 W STA NM	HF OM3 S156 W STA NM	HF 008 S156 W STA NM
168 Fibre	HF 062 S168 W STA NM	HF 050 S168 W STA NM	HF OM3 S168 W STA NM	HF 008 S168 W STA NM
180 Fibre	HF 062 S180 W STA NM	HF 050 S180 W STA NM	HF OM3 S180 W STA NM	HF 008 S180 W STA NM
192 Fibre	HF 062 S192 W STA NM	HF 050 S192 W STA NM	HF OM3 S192 W STA NM	HF 008 S192 W STA NM
204 Fibre	HF 062 S204 W STA NM	HF 050 S204 W STA NM	HF OM3 S204 W STA NM	HF 008 S204 W STA NM
216 Fibre	HF 062 S216 W STA NM	HF 050 S216 W STA NM	HF OM3 S216 W STA NM	HF 008 S216 W STA NM

Fibre Selection

062 H62 | 050 H50 | OM3 Z50 | 008 D08

Corrugated Steel Tape Armour

Rigid Glass Central Strength Member

Choice of Universal or External Sheath

18 x 12 Fibres Per Tube Offering up to 216 Fibres

2.50mm Gel Filled Loose Tube

PRODUCT DESCRIPTION:

For direct burial applications, the single sheathed product range offers up to 216 fibres in a compact and relatively flexible construction. The product range consists of multiple 2.50mm loose tubes containing up to 12 fibres and solid fillers where required, stranded around a sheathed rigid glass non metallic central strength member. A layer of water blocking tape provides interstitial water blocking and a layer of corrugated steel tape armour gives additional crush resistance.

PRODUCT PERFORMANCE:

Crush (N):
7500
Impact (Nm):
30
Torsion (turns / m):
5
Fire:
IEC 60332-1
(MSU only)

Temp - Operation:
-40°c to +70°c
Temp - Storage:
-40°c to +70°c
Temp - Installation:
-10°c to +70°c
Water Penetration:
<3m @ 24h

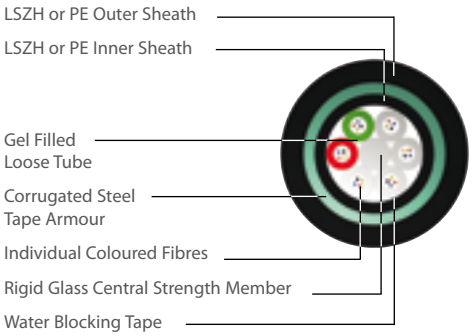
Tested in accordance with IEC 60794-1-2 unless stated

Brand-Rex Optical Cables - Universal MTU 01 and External MTE 01

Burial Steel Tape Armoured Multi Loose Tube Cable

Product Data

	Diameter mm	Weight (U)/(E) kg / km	Max Tensile Load N	Min Static Bend mm	Min Dynamic Bend mm
4 - 24 Fibre	14.10	247/198	1500	145	215


LSZH or PE Outer Sheath
LSZH or PE Inner Sheath
Gel Filled Loose Tube
Corrugated Steel Tape Armour
Individual Coloured Fibres
Rigid Glass Central Strength Member
Water Blocking Tape

Corrugated Steel Tape Armour

Rigid Glass Central Strength Member

Choice of Universal or External Sheath

6 x 4 Fibres Per Tube Offering up to 24 Fibres

2.10mm Gel filled Loose Tube

Product Part Numbering - MTU 01

	62.5/125	50/125	OM3	8/125
4 Fibre	HF 062 S4 W L STA LU	HF 050 S4 W L STA LU	HF OM3 S4 W L STA LU	HF 008 S4 W L STA LU
8 Fibre	HF 062 S8 W L STA LU	HF 050 S8 W L STA LU	HF OM3 S8 W L STA LU	HF 008 S8 W L STA LU
12 Fibre	HF 062 S12 W L STA LU	HF 050 S12 W L STA LU	HF OM3 S12 W L STA LU	HF 008 S12 W L STA LU
16 Fibre	HF 062 S16 W L STA LU	HF 050 S16 W L STA LU	HF OM3 S16 W L STA LU	HF 008 S16 W L STA LU
20 Fibre	HF 062 S20 W L STA LU	HF 050 S20 W L STA LU	HF OM3 S20 W L STA LU	HF 008 S20 W L STA LU
24 Fibre	HF 062 S24 W L STA LU	HF 050 S24 W L STA LU	HF OM3 S24 W L STA LU	HF 008 S24 W L STA LU

Product Part Numbering - MTE 01

	62.5/125	50/125	OM3	8/125
4 Fibre	HF 062 S4 W NM STA NM	HF 050 S4 W NM STA NM	HF OM3 S4 W NM STA NM	HF 008 S4 W NM STA NM
8 Fibre	HF 062 S8 W NM STA NM	HF 050 S8 W NM STA NM	HF OM3 S8 W NM STA NM	HF 008 S8 W NM STA NM
12 Fibre	HF 062 S12 W NM STA NM	HF 050 S12 W NM STA NM	HF OM3 S12 W NM STA NM	HF 008 S12 W NM STA NM
16 Fibre	HF 062 S16 W NM STA NM	HF 050 S16 W NM STA NM	HF OM3 S16 W NM STA NM	HF 008 S16 W NM STA NM
20 Fibre	HF 062 S20 W NM STA NM	HF 050 S20 W NM STA NM	HF OM3 S20 W NM STA NM	HF 008 S20 W NM STA NM
24 Fibre	HF 062 S24 W NM STA NM	HF 050 S24 W NM STA NM	HF OM3 S24 W NM STA NM	HF 008 S24 W NM STA NM

Fibre Selection

062 H62 | 050 H50 | OM3 Z50 | 008 D08

PRODUCT DESCRIPTION:

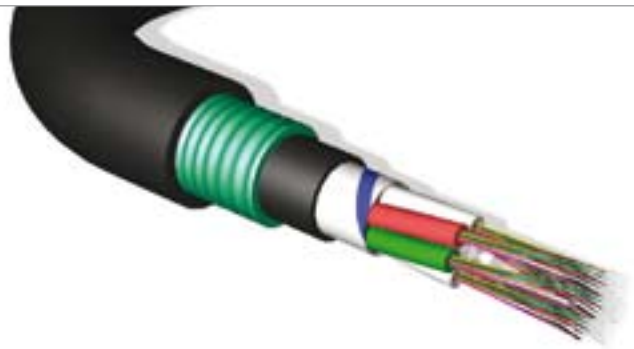
For applications where a higher tensile load is required versus that offered by unitube constructions, the universal product range offers a compact low fibre count direct burial grade cable. The product range consists of multiple 2.10mm loose tubes containing up to 4 fibres and solid fillers where required, stranded around a rigid glass non metallic central strength member. A layer of water blocking tape provides interstitial water blocking and the LSZH or PE inner sheath and a layer of corrugated steel tape armour provide additional crush resistance.

PRODUCT PERFORMANCE:

Crush (N):
7500
Impact (Nm):
30
Torsion (turns / m):
5
Fire:
IEC 60332-1
(MSU2 only)

Temp - Operation:
-40°c to +70°c
Temp - Storage:
-40°c to +70°c
Temp - Installation:
-10°c to +70°c
Water Penetration:
<3m @ 24h

Tested in accordance with IEC 60794-1-2 unless stated

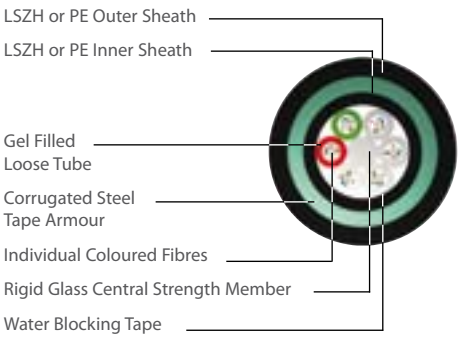


Brand-Rex Optical Cables - Universal MTU 02 and External MTE 02

Universal Direct Burial Steel Tape Armoured Multi Loose Tube Cable

Product Data

	Diameter mm	Weight (U)/(E) kg / km	Max Tensile Load N	Min Static Bend mm	Min Dynamic Bend mm
12 - 72 Fibre	15.30	284/231	2000	153	230


LSZH or PE Outer Sheath
LSZH or PE Inner Sheath
Gel Filled Loose Tube
Corrugated Steel Tape Armour
Individual Coloured Fibres
Rigid Glass Central Strength Member
Water Blocking Tape

Corrugated Steel Tape Armour

Rigid Glass Central Strength Member

Choice of Universal or External Sheath

6 x 12 Fibres Per Tube Offering up to 72 Fibres

2.50mm Gel Filled Loose Tube

Product Part Numbering - MTU 02

	62.5/125	50/125	OM3	8/125
12 Fibre	HF 062 S12 W L STA LU	HF 050 S12 W L STA LU	HF OM3 S12 W L STA LU	HF 008 S12 W L STA LU
24 Fibre	HF 062 S24 W L STA LU	HF 050 S24 W L STA LU	HF OM3 S24 W L STA LU	HF 008 S24 W L STA LU
36 Fibre	HF 062 S36 W L STA LU	HF 050 S36 W L STA LU	HF OM3 S36 W L STA LU	HF 008 S36 W L STA LU
48 Fibre	HF 062 S48 W L STA LU	HF 050 S48 W L STA LU	HF OM3 S48 W L STA LU	HF 008 S48 W L STA LU
60 Fibre	HF 062 S60 W L STA LU	HF 050 S60 W L STA LU	HF OM3 S60 W L STA LU	HF 008 S60 W L STA LU
72 Fibre	HF 062 S72 W L STA LU	HF 050 S72 W L STA LU	HF OM3 S72 W L STA LU	HF 008 S72 W L STA LU

Product Part Numbering - MTE 02

	62.5/125	50/125	OM3	8/125
12 Fibre	HF 062 S12 WNM STA NM	HF 050 S12 WNM STA NM	HF OM3 S12 WNM STA NM	HF 008 S12 WNM STA NM
24 Fibre	HF 062 S24 WNM STA NM	HF 050 S24 WNM STA NM	HF OM3 S24 WNM STA NM	HF 008 S24 WNM STA NM
36 Fibre	HF 062 S36 WNM STA NM	HF 050 S36 WNM STA NM	HF OM3 S36 WNM STA NM	HF 008 S36 WNM STA NM
48 Fibre	HF 062 S48 WNM STA NM	HF 050 S48 WNM STA NM	HF OM3 S48 WNM STA NM	HF 008 S48 WNM STA NM
60 Fibre	HF 062 S60 WNM STA NM	HF 050 S60 WNM STA NM	HF OM3 S60 WNM STA NM	HF 008 S60 WNM STA NM
72 Fibre	HF 062 S72 WNM STA NM	HF 050 S72 WNM STA NM	HF OM3 S72 WNM STA NM	HF 008 S72 WNM STA NM

Fibre Selection

062 H62 | 050 H50 | OM3 Z50 | 008 D08

PRODUCT DESCRIPTION:

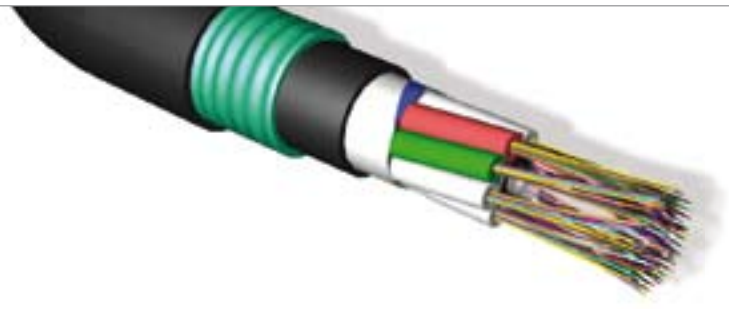
For direct burial applications, the twin sheathed product range offers up to 72 fibres in a compact and relatively flexible construction. The product range consists of multiple 2.50mm loose tubes containing up to 12 fibres and solid fillers where required, stranded around a rigid glass non metallic central strength member.
A layer of water blocking tape provides interstitial water blocking and a layer of corrugated steel tape armour gives additional crush resistance.

PRODUCT PERFORMANCE:

Crush (N):
7500
Impact (Nm):
30
Torsion (turns / m):
5
Fire:
IEC 60332-1
(MSU2 only)

Temp - Operation:
-40°c to +70°c
Temp - Storage:
-40°c to +70°c
Temp - Installation:
-10°c to +70°c
Water Penetration:
<3m @ 24h

Tested in accordance with IEC 60794-1-2 unless stated



Brand-Rex Optical Cables - Universal MTU 04 and External MTE 04

Universal Direct Burial Steel Tape Armoured Multi Loose Tube Cable

Product Data

	Diameter mm	Weight (U)/(E) kg / km	Max Tensile Load N	Min Static Bend mm	Min Dynamic Bend mm
12 - 96 Fibre	16.7	330/260	3000	167	250

Product Part Numbering - MTU 04

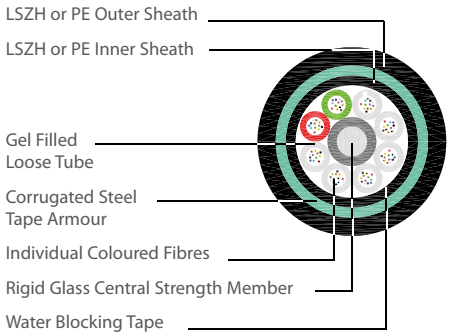
	62.5/125	50/125	OM3	8/125
12 Fibre	HF 062 S12 W L STA LU	HF 050 S12 W L STA LU	HF OM3 S12 W L STA LU	HF 008 S12 W L STA LU
24 Fibre	HF 062 S24 W L STA LU	HF 050 S24 W L STA LU	HF OM3 S24 W L STA LU	HF 008 S24 W L STA LU
36 Fibre	HF 062 S36 W L STA LU	HF 050 S36 W L STA LU	HF OM3 S36 W L STA LU	HF 008 S36 W L STA LU
48 Fibre	HF 062 S48 W L STA LU	HF 050 S48 W L STA LU	HF OM3 S48 W L STA LU	HF 008 S48 W L STA LU
60 Fibre	HF 062 S60 W L STA LU	HF 050 S60 W L STA LU	HF OM3 S60 W L STA LU	HF 008 S60 W L STA LU
72 Fibre	HF 062 S72 W L STA LU	HF 050 S72 W L STA LU	HF OM3 S72 W L STA LU	HF 008 S72 W L STA LU
84 Fibre	HF 062 S84 W L STA LU	HF 050 S84 W L STA LU	HF OM3 S84 W L STA LU	HF 008 S84 W L STA LU
96 Fibre	HF 062 S96 W L STA LU	HF 050 S96 W L STA LU	HF OM3 S96 W L STA LU	HF 008 S96 W L STA LU

Product Part Numbering - MTE 04

	62.5/125	50/125	OM3	8/125
12 Fibre	HF 062 S12 WNM STA NM	HF 050 S12 WNM STA NM	HF OM3 S12 WNM STA NM	HF 008 S12 WNM STA NM
24 Fibre	HF 062 S24 WNM STA NM	HF 050 S24 WNM STA NM	HF OM3 S24 WNM STA NM	HF 008 S24 WNM STA NM
36 Fibre	HF 062 S36 WNM STA NM	HF 050 S36 WNM STA NM	HF OM3 S36 WNM STA NM	HF 008 S36 WNM STA NM
48 Fibre	HF 062 S48 WNM STA NM	HF 050 S48 WNM STA NM	HF OM3 S48 WNM STA NM	HF 008 S48 WNM STA NM
60 Fibre	HF 062 S60 WNM STA NM	HF 050 S60 WNM STA NM	HF OM3 S60 WNM STA NM	HF 008 S60 WNM STA NM
72 Fibre	HF 062 S72 WNM STA NM	HF 050 S72 WNM STA NM	HF OM3 S72 WNM STA NM	HF 008 S72 WNM STA NM
84 Fibre	HF 062 S84 WNM STA NM	HF 050 S84 WNM STA NM	HF OM3 S84 WNM STA NM	HF 008 S84 WNM STA NM
96 Fibre	HF 062 S96 WNM STA NM	HF 050 S96 WNM STA NM	HF OM3 S96 WNM STA NM	HF 008 S96 WNM STA NM

Fibre Selection

062 H62 | 050 H50 | OM3 Z50 | 008 D08


LSZH or PE Outer Sheath
LSZH or PE Inner Sheath
Gel Filled Loose Tube
Corrugated Steel Tape Armour
Individual Coloured Fibres
Rigid Glass Central Strength Member
Water Blocking Tape

Corrugated Steel Tape Armour

Rigid Glass Central Strength Member

Choice of Universal or External Sheath

8 x 12 Fibres Per Tube Offeringup to 96 Fibres

2.50mm Gel Filled Loose Tube

PRODUCT DESCRIPTION:

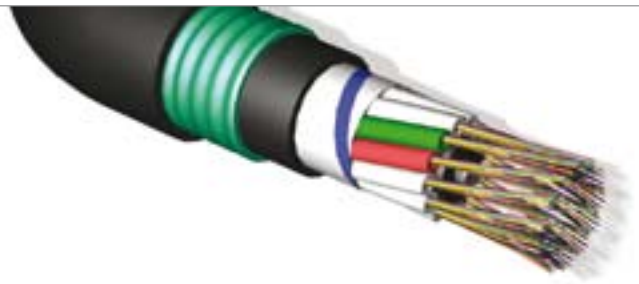
For direct burial applications, the twin sheathed product range offers up to 96 fibres in a compact and relatively flexible construction. The product range consists of multiple 2.50mm loose tubes containing up to 12 fibres and solid fillers where required, stranded around a rigid glass non metallic central strength member.
A layer of water blocking tape provides interstitial water blocking and a layer of corrugated steel tape armour gives additional crush resistance.

PRODUCT PERFORMANCE:

Crush (N):
7500
Impact (Nm):
30
Torsion (turns / m):
5
Fire:
IEC 60332-1
(MTU only)

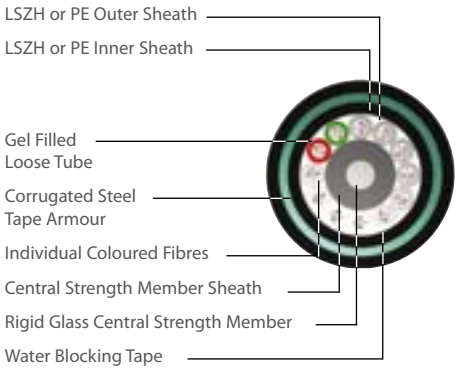
Temp - Operation:
-40°c to +70°c
Temp - Storage:
-40°c to +70°c
Temp - Installation:
-10°c to +70°c
Water Penetration:
<3m @ 24h

Tested in accordance with IEC 60794-1-2 unless stated



Brand-Rex Optical Cables - Universal MTU 03 and External MTE 03

Direct Burial Steel Tape Armoured Multi Loose Tube cable


LSZH or PE Outer Sheath
LSZH or PE Inner Sheath
Gel Filled Loose Tube
Corrugated Steel Tape Armour
Individual Coloured Fibres
Central Strength Member Sheath
Rigid Glass Central Strength Member
Water Blocking Tape

Product Data

	Diameter mm	Weight (U)/(E) kg / km	Max Tensile Load N	Min Static Bend mm	Min Dynamic Bend mm
96 - 144 Fibre	20.00	445/355	2000	200	300

Product Part Numbering - MTU 03

	62.5/125	50/125	OM3	8/125
96 Fibre	HF 062 S96 W L STA LU	HF 050 S96 W L STA LU	HF OM3 S96 W L STA LU	HF 008 S96 W L STA LU
108 Fibre	HF 062 S108 W L STA LU	HF 050 S108 W L STA LU	HF OM3 S108 W L STA LU	HF 008 S108 W L STA LU
120 Fibre	HF 062 S120 W L STA LU	HF 050 S120 W L STA LU	HF OM3 S120 W L STA LU	HF 008 S120 W L STA LU
132 Fibre	HF 062 S132 W L STA LU	HF 050 S132 W L STA LU	HF OM3 S132 W L STA LU	HF 008 S132 W L STA LU
144 Fibre	HF 062 S144 W L STA LU	HF 050 S144 W L STA LU	HF OM3 S144 W L STA LU	HF 008 144 W L STA LU

Product Part Numbering - MTE 03

	62.5/125	50/125	OM3	8/125
96 Fibre	HF 062 S96 W NM STA NM	HF 050 S96 W NM STA NM	HF OM3 S96 W NM STA NM	HF 008 S96 W NM STA NM
108 Fibre	HF 062 S108 W NM STA NM	HF 050 S108 W NM STA NM	HF OM3 S108 W NM STA NM	HF 008 S108 W NM STA NM
120 Fibre	HF 062 S120 W NM STA NM	HF 050 S120 W NM STA NM	HF OM3 S120 W NM STA NM	HF 008 S120 W NM STA NM
132 Fibre	HF 062 S132 W NM STA NM	HF 050 S132 W NM STA NM	HF OM3 S132 W NM STA NM	HF 008 S132 W NM STA NM
144 Fibre	HF 062 S144 W NM STA NM	HF 050 S144 W NM STA NM	HF OM3 S144 W NM STA NM	HF 008 144 W NM STA NM

Fibre Selection

062 H62 | 050 H50 | OM3 Z50 | 008 D08

Corrugated Steel Tape Armour

Rigid Glass Central Strength Member

Choice of Universal or External Sheath

12 x 12 Fibres Per Tube Offering up to 144 Fibres

2.50mm Gel Filled Loose Tube

PRODUCT DESCRIPTION:

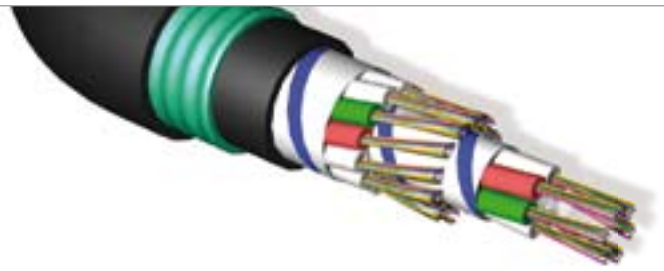
For direct burial applications, the twin sheathed product range offers up to 144 fibres in a compact and relatively flexible construction. The range consists of multiple 2.50mm loose tubes containing up to 12 fibres and solid fillers where required, stranded around a sheathed rigid glass non metallic central strength member. A layer of water blocking tape provides interstitial water blocking and a layer of corrugated steel tape armour gives additional crush resistance.

PRODUCT PERFORMANCE:

Crush (N):
7500
Impact (Nm):
30
Torsion (turns / m):
5
Fire:
IEC 60332-1
(MSU only)

Temp - Operation:
-40°c to +70°c
Temp - Storage:
-40°c to +70°c
Temp - Installation:
-10°c to +70°c
Water Penetration:
<3m @ 24h

Tested in accordance with IEC 60794-1-2 unless stated



Brand-Rex Optical Cables - Universal MTU 05 and External MTE 05

Direct Burial Steel Tape Armoured Multi Loose Tube cable

Product Data

	Diameter mm	Weight (U)/(E) kg / km	Max Tensile Load N	Min Static Bend mm	Min Dynamic Bend mm
144-216 Fibre	20.90	451/370	2000	209	314

Product Part Numbering - MTU 05

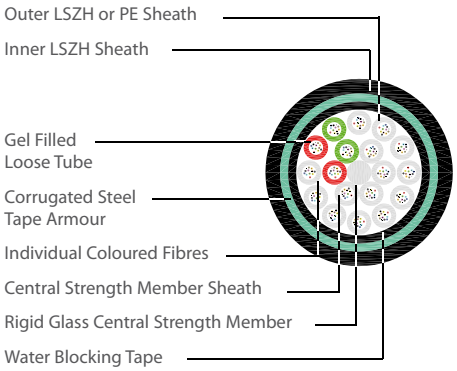
	62.5/125	50/125	OM3	8/125
144 Fibre	HF 062 S144 W L STA LU	HF 050 S144 W L STA LU	HF OM3 S144 W L STA LU	HF 008 S144 W L STA LU
156 Fibre	HF 062 S156 W L STA LU	HF 050 S156 W L STA LU	HF OM3 S156 W L STA LU	HF 008 S156 W L STA LU
168 Fibre	HF 062 S168 W L STA LU	HF 050 S168 W L STA LU	HF OM3 S168 W L STA LU	HF 008 S168 W L STA LU
180 Fibre	HF 062 S180 W L STA LU	HF 050 S180 W L STA LU	HF OM3 S180 W L STA LU	HF 008 S180 W L STA LU
192 Fibre	HF 062 S192 W L STA LU	HF 050 S192 W L STA LU	HF OM3 S192 W L STA LU	HF 008 192 W L STA LU
204 Fibre	HF 062 S204 W L STA LU	HF 050 S204 W L STA LU	HF OM3 S204 W L STA LU	HF 008 S204 W L STA LU
216 Fibre	HF 062 S216 W L STA LU	HF 050 S216 W L STA LU	HF OM3 S216 W L STA LU	HF 008 S216 W L STA LU

Product Part Numbering - MTE 05

	62.5/125	50/125	OM3	8/125
144 Fibre	HF 062 S144 W NM STA NM	HF 050 S144 W NM STA NM	HF OM3 S144 W NM STA NM	HF 008 S144 W NM STA NM
156 Fibre	HF 062 S156 W NM STA NM	HF 050 S156 W NM STA NM	HF OM3 S156 W NM STA NM	HF 008 S156 W NM STA NM
168 Fibre	HF 062 S168 W NM STA NM	HF 050 S168 W NM STA NM	HF OM3 S168 W NM STA NM	HF 008 S168 W NM STA NM
180 Fibre	HF 062 S132 W NM STA NM	HF 050 S132 W NM STA NM	HF OM3 S132 W NM STA NM	HF 008 S168 W NM STA NM
192 Fibre	HF 062 S192 W NM STA NM	HF 050 S192 W NM STA NM	HF OM3 S192 W NM STA NM	HF 008 192 W NM STA NM
204 Fibre	HF 062 S204 W NM STA NM	HF 050 S204 W NM STA NM	HF OM3 S204 W NM STA NM	HF 008 S204 W NM STA NM
216 Fibre	HF 062 S216 W NM STA NM	HF 050 S216 W NM STA NM	HF OM3 S216 W NM STA NM	HF 008 S216 W NM STA NM

Fibre Selection

062 H62 | 050 H50 | OM3 Z50 | 008 D08



Corrugated Steel Tape Armour

Rigid Glass Central Strength Member

Choice of Universal or External Sheath

18 x 12 Fibres Per Tube Offering up to 216 Fibres

2.50mm Gel Filled Loose Tube

PRODUCT DESCRIPTION:

For direct burial applications, the twin sheathed product range offers up to 216 fibres in a compact and relatively flexible construction. The range consists of multiple 2.50mm loose tubes containing up to 12 fibres and solid fillers where required, stranded around a sheathed rigid glass non metallic central strength member.
A layer of water blocking tape provides interstitial water blocking and a layer of corrugated steel tape armour gives additional crush resistance.

PRODUCT PERFORMANCE:

Crush (N):
7500
Impact (Nm):
30
Torsion (turns / m):
5
Fire:
IEC 60332-1
(MSU only)

Temp - Operation:
-40°c to +70°c
Temp - Storage:
-40°c to +70°c
Temp - Installation:
-10°c to +70°c
Water Penetration:
<3m @ 24h

Tested in accordance with IEC 60794-1-2 unless stated

Brand-Rex Optical Cables - External MAE 01

External Duct Grade Cable with Aluminium Moisture Barrier

Product Data

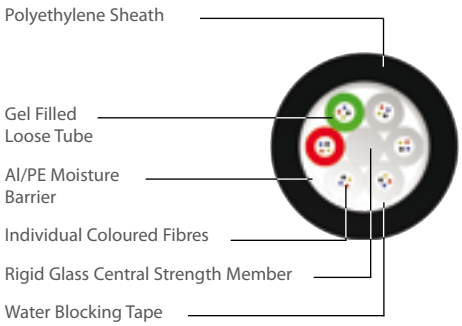
	Diameter mm	Weight kg / km	Max Tensile Load N	Min Static Bend mm	Min Dynamic Bend mm
4 - 24 Fibre	10.70	98	1500	110	165

Product Part Numbering - MAE 01

	62.5/125	50/125	OM3	8/125
4 Fibre	HF 062 S4 WMBNM	HF 050 S4 WMBNM	HF OM3 S4 WMBNM	HF 008 S4 WMBNM
8 Fibre	HF 062 S8 WMBNM	HF 050 S8 WMBNM	HF OM3 S8 WMBNM	HF 008 S8 WMBNM
12 Fibre	HF 062 S12 WMBNM	HF 050 S12 WMBNM	HF OM3 S12 WMBNM	HF 008 S12 WMBNM
16 Fibre	HF 062 S16 WMBNM	HF 050 S16 WMBNM	HF OM3 S16 WMBNM	HF 008 S16 WMBNM
20 Fibre	HF 062 S20 WMBNM	HF 050 S20 WMBNM	HF OM3 S20 WMBNM	HF 008 S20 WMBNM
24 Fibre	HF 062 S24 WMBNM	HF 050 S24 WMBNM	HF OM3 S24 WMBNM	HF 008 S24 WMBNM

Fibre Selection

062 H62 | 050 H50 | OM3 Z50 | 008 D08



Coated Aluminium Moisture Barrier

Rigid Glass Central Strength Member

Polyethylene Sheath

2.10mm Gel Filled Loose Tube

PRODUCT DESCRIPTION:

For applications where a traditional moisture barrier is required, the external product range offers moisture penetration protection using a polyethylene coated aluminium tape.

The product range consists of multiple 2.10mm loose tubes containing up to 4 fibres per tube and solid fillers where required, stranded around a rigid glass non metallic strength member.
A layer of waterblocking tape provides interstitial waterblocking under the coated aluminium moisture barrier tape.

PRODUCT PERFORMANCE:

Crush (N):
2500
Impact (Nm):
25
Torsion (turns / m):
5

Temp - Operation:
-40°c to +70°c
Temp - Storage:
-40°c to +70°c
Temp - Installation:
-10°c to +70°c
Water Penetration:
<3m @ 24h

Tested in accordance with IEC 60794-1-2 unless stated

Brand-Rex Optical Cables - External MAE 02

External Duct Grade Cable with Aluminium Moisture Barrier

Product Data

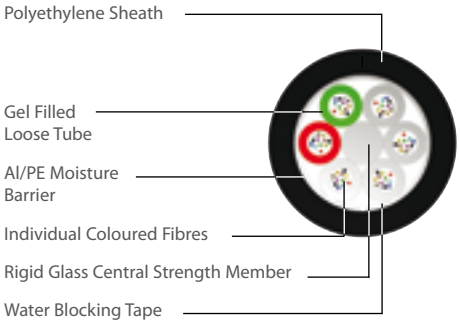
	Diameter mm	Weight kg / km	Max Tensile Load N	Min Static Bend mm	Min Dynamic Bend mm
12 - 72 Fibre	11.90	122	2000	120	180

Product Part Numbering - MAE 02

	62.5/125	50/125	OM3	8/125
12 Fibre	HF 062 S12 WMBNM	HF 050 S12 WMBNM	HF OM3 S12 WMBNM	HF 008 S12 WMBNM
24 Fibre	HF 062 S24 WMBNM	HF 050 S24 WMBNM	HF OM3 S24 WMBNM	HF 008 S24 WMBNM
36 Fibre	HF 062 S36 WMBNM	HF 050 S36 WMBNM	HF OM3 S36 WMBNM	HF 008 S36 WMBNM
48 Fibre	HF 062 S48 WMBNM	HF 050 S48 WMBNM	HF OM3 S48 WMBNM	HF 008 S48 WMBNM
60 Fibre	HF 062 S60 WMBNM	HF 050 S60 WMBNM	HF OM3 S60 WMBNM	HF 008 S60 WMBNM
72 Fibre	HF 062 S72 WMBNM	HF 050 S72 WMBNM	HF OM3 S72 WMBNM	HF 008 S72 WMBNM

Fibre Selection

062 H62 | 050 H50 | OM3 Z50 | 008 D08



Coated Aluminium Moisture Barrier

Rigid Glass Central Strength Member

Polyethylene Sheath

2.50mm Gel Filled Loose Tube

PRODUCT DESCRIPTION:

For applications where a traditional moisture barrier is required the external MAB 06 product range offers moisture penetration protection using a polyethylene coated aluminium tape.

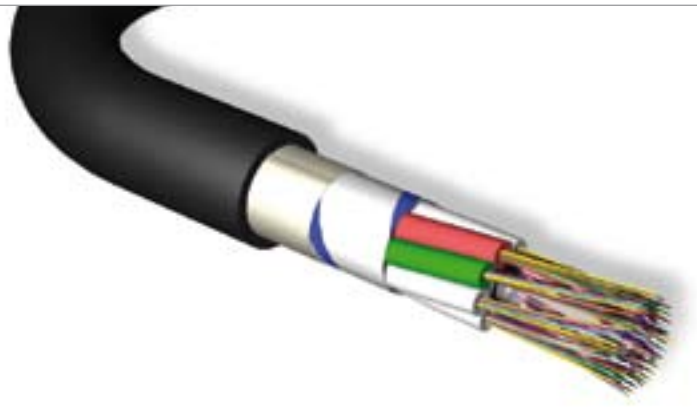
The MAB 06 product range consists of multiple 2.50mm loose tubes containing up to 12 fibres per tube and solid fillers where required, stranded around a rigid glass non metallic strength member. A layer of waterblocking tape provides interstitial waterblocking under the coated aluminium moisture barrier tape. All MAB 06 product have a Polyethylene sheath making them suitable for external applications.

PRODUCT PERFORMANCE:

Crush (N):
2500
Impact (Nm):
25
Torsion (turns / m):
5

Temp - Operation:
-40°c to +70°c
Temp - Storage:
-40°c to +70°c
Temp - Installation:
-10°c to +70°c
Water Penetration:
<3m @ 24h

Tested in accordance with IEC 60794-1-2 unless stated

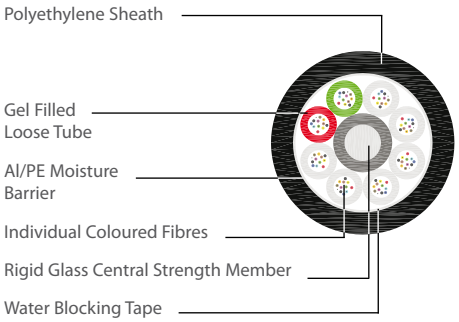


Brand-Rex Optical Cables - External MAE 04

External Duct Grade Cable with Aluminium Moisture Barrier

Product Data

	Diameter mm	Weight kg / km	Max Tensile Load N	Min Static Bend mm	Min Dynamic Bend mm
12 - 96 Fibre	11.90	122	2000	120	180



Coated Aluminium Moisture Barrier

Rigid Glass Central Strength Member

Polyethylene Sheath

2.50mm Gel Filled Loose Tube

Product Part Numbering - MAE 04

	62.5/125	50/125	OM3	8/125
12 Fibre	HF 062 S12 WMBNM	HF 050 S12 WMBNM	HF OM3 S12 WMBNM	HF 008 S12 WMBNM
24 Fibre	HF 062 S24 WMBNM	HF 050 S24 WMBNM	HF OM3 S24 WMBNM	HF 008 S24 WMBNM
36 Fibre	HF 062 S36 WMBNM	HF 050 S36 WMBNM	HF OM3 S36 WMBNM	HF 008 S36 WMBNM
48 Fibre	HF 062 S48 WMBNM	HF 050 S48 WMBNM	HF OM3 S48 WMBNM	HF 008 S48 WMBNM
60 Fibre	HF 062 S60 WMBNM	HF 050 S60 WMBNM	HF OM3 S60 WMBNM	HF 008 S60 WMBNM
72 Fibre	HF 062 S72 WMBNM	HF 050 S72 WMBNM	HF OM3 S72 WMBNM	HF 008 S72 WMBNM
84 Fibre	HF 062 S84 WMBNM	HF 050 S84 WMBNM	HF OM3 S84 WMBNM	HF 008 S844 WMBNM
96 Fibre	HF 062 S96 WMBNM	HF 050 S96 WMBNM	HF OM3 S96 WMBNM	HF 008 S96 WMBNM

PRODUCT DESCRIPTION:

For applications where a traditional moisture barrier is required the external MAB 06 product range offers moisture penetration protection using a polyethylene coated aluminium tape.

The MAB 06 product range consists of multiple 2.50mm loose tubes containing up to 12 fibres per tube and solid fillers where required, stranded around a rigid glass non metallic strength member. A layer of waterblocking tape provides interstitial waterblocking under the coated aluminium moisture barrier tape. All MAB 06 product have a Polyethylene sheath making them suitable for external applications.

PRODUCT PERFORMANCE:

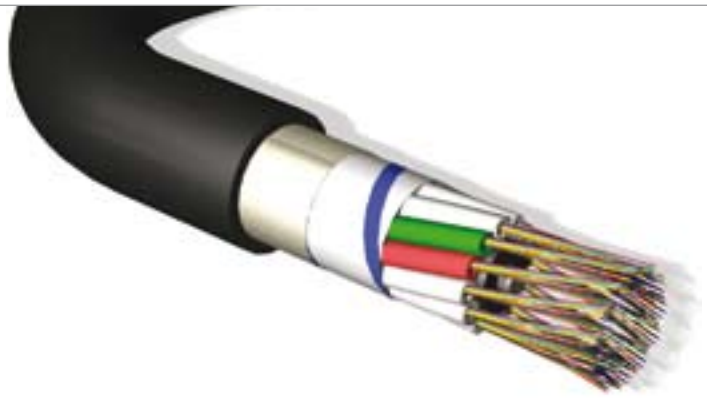
Crush (N):
2500
Impact (Nm):
25
Torsion (turns / m):
5

Temp - Operation:
-40°c to +70°c
Temp - Storage:
-40°c to +70°c
Temp - Installation:
-10°c to +70°c
Water Penetration:
<3m @ 24h

Tested in accordance with IEC 60794-1-2 unless stated

Fibre Selection

062 H62 | 050 H50 | OM3 Z50 | 008 D08

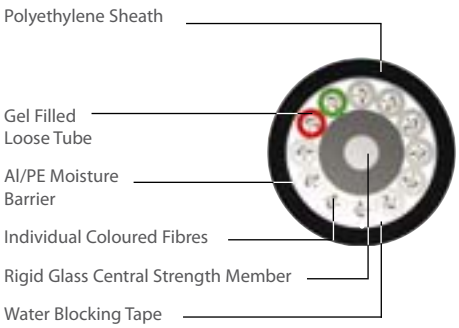


Brand-Rex Optical Cables - External MAE 03

External Duct Grade Cable with Aluminium Moisture Barrier

Product Data

	Diameter mm	Weight kg / km	Max Tensile Load N	Min Static Bend mm	Min Dynamic Bend mm
96 - 144 Fibre	16.70	231	2500	170	250



Coated Aluminium Moisture Barrier
Rigid Glass Central Strength Member
Polyethylene Sheath
2.50mm Gel Filled Loose Tube

Product Part Numbering MAE 03

	62.5/125	50/125	OM3	8/125
96 Fibre	HF 062 S96 WMBNM	HF 050 S96 WMBNM	HF OM3 S96 WMBNM	HF 008 S96 WMBNM
108 Fibre	HF 062 S108 WMBNM	HF 050 S108 WMBNM	HF OM3 S108 WMBNM	HF 008 S108 WMBNM
120 Fibre	HF 062 S120 WMBNM	HF 050 S120 WMBNM	HF OM3 S120 WMBNM	HF 008 S120 WMBNM
132 Fibre	HF 062 S132 WMBNM	HF 050 S132 WMBNM	HF OM3 S132 WMBNM	HF 008 S132 WMBNM
144 Fibre	HF 062 S144 WMBNM	HF 050 S144 WMBNM	HF OM3 S144 WMBNM	HF 008 S144 WMBNM

Fibre Selection

062 H62 | 050 H50 | OM3 Z50 | 008 D08

PRODUCT DESCRIPTION:

For applications where a traditional moisture barrier is required, the product range offers moisture penetration protection using a polyethylene coated aluminium tape.

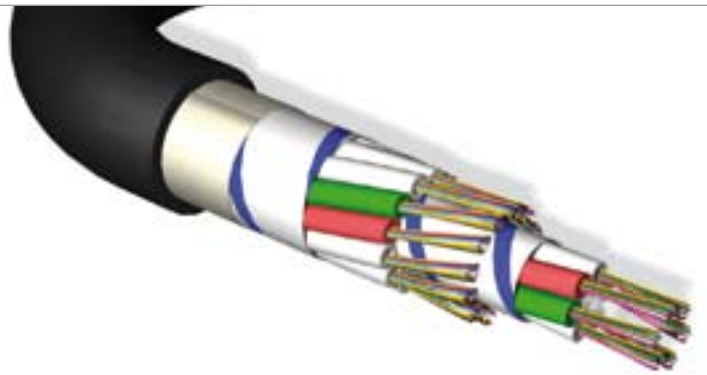
The product range consists of multiple 2.50mm loose tubes containing up to 12 fibres per tube and solid fillers where required, stranded around a rigid glass non metallic strength member. A layer of waterblocking tape provides interstitial waterblocking under the coated aluminium moisture barrier tape.

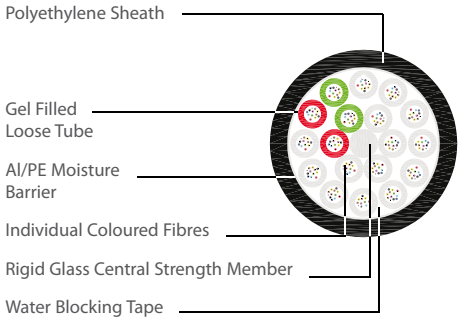
PRODUCT PERFORMANCE:

Crush (N):
2500
Impact (Nm):
25
Torsion (turns / m):
5

Temp - Operation:
-40°c to +70°c
Temp - Storage:
-40°c to +70°c
Temp - Installation:
-10°c to +70°c
Water Penetration:
<3m @ 24h

Tested in accordance with IEC 60794-1-2 unless stated





Brand-Rex Optical Cables - External MAE 05

External Duct Grade Cable with Aluminium Moisture Barrier

Product Data

	Diameter mm	Weight kg / km	Max Tensile Load N	Min Static Bend mm	Min Dynamic Bend mm
144-216 Fibre	16.70	231	2500	170	250

Coated Aluminium Moisture Barrier
Rigid Glass Central Strength Member
Polyethylene Sheath
2.50mm Gel Filled Loose Tube

Product Part Numbering MAE 05

	62.5/125	50/125	OM3	8/125
144 Fibre	HF 062 S144 WMBNM	HF 050 S144 WMBNM	HF OM3 S144 WMBNM	HF 008 S144 WMBNM
156 Fibre	HF 062 S156 WMBNM	HF 050 S156 WMBNM	HF OM3 S156 WMBNM	HF 008 S156 WMBNM
168 Fibre	HF 062 S168 WMBNM	HF 050 S168 WMBNM	HF OM3 S168 WMBNM	HF 008 S168 WMBNM
180 Fibre	HF 062 S180 WMBNM	HF 050 S180 WMBNM	HF OM3 S180 WMBNM	HF 008 S180 WMBNM
192 Fibre	HF 062 S192 WMBNM	HF 050 S192 WMBNM	HF OM3 S192 WMBNM	HF 008 S192 WMBNM
204 Fibre	HF 062 S204 WMBNM	HF 050 S204 WMBNM	HF OM3 S204 WMBNM	HF 008 S204 WMBNM
216 Fibre	HF 062 S216 WMBNM	HF 050 S216 WMBNM	HF OM3 S216 WMBNM	HF 008 S216 WMBNM

PRODUCT DESCRIPTION:

For applications where a traditional moisture barrier is required, the product range offers moisture penetration protection using a polyethylene coated aluminium tape.

The product range consists of multiple 2.50mm loose tubes containing up to 12 fibres per tube and solid fillers where required, stranded around a rigid glass non metallic strength member.
A layer of waterblocking tape provides interstitial waterblocking under the coated aluminium moisture barrier tape.

PRODUCT PERFORMANCE:

Crush (N):
2500
Impact (Nm):
25
Torsion (turns / m):
5

Temp - Operation:
-40°c to +70°c
Temp - Storage:
-40°c to +70°c
Temp - Installation:
-10°c to +70°c
Water Penetration:
<3m @ 24h

Fibre Selection

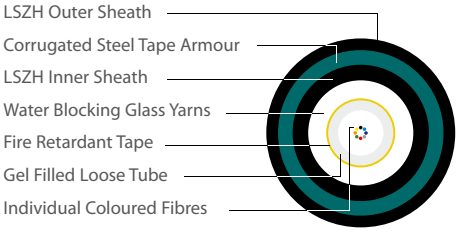
062 H62 | 050 H50 | OM3 Z50 | 008 D08

Tested in accordance with IEC 60794-1-2 unless stated

Brand-Rex is pleased to offer FibrePlus cables for specialist applications. Two FibrePlus cables are described in this section. The UFS Fire Survival cable is used in areas where critical data transmission must continue when the building structure in which it is installed is on fire. For this reason its use in large public buildings such as datacentres, airports, railway stations, stadia and onshore/ offshore industrial structures is becoming increasingly common.

The use of the cable in building management, fire and security systems means that these vital systems will remain functional in the event of a real life incident which requires an emergency evacuation. The TFD Field Deployable Cable is a military approved cable used for tactical cable applications. This type of cable is also used for outside broadcast media events which require high bandwidth optical cables for a reliable network in an extreme environment.

As a company that is driven by our customers needs, Brand-Rex will always be happy to offer specialist products to order based on your own specification. This includes complex requirements ranging from cables for extreme environments to simple requirements such as composite cables, custom sheath colours or printing. Please enquire about our customised cable service.



Brand-Rex Optical Cables - Universal UFS 01

Unitube Fire Survival Cable

Independent 3rd party tested (BRE)

Unitube design offering up to 24 fibres

Layer of fire retardant tape

Twin low smoke halogen-free sheaths

4.00mm gel filled loose tube

Product Data

	Diameter mm	Weight kg / km	Max Tensile Load N	Min Static Bend mm	Min Dynamic Bend mm
4-24 Fibre	13.00	210	700	130	195

Product Part Numbering

	62.5/125	50/125	OM3	8/125
4 Fibre	EF 062 UNI4 L STA LU FS	EF 050 UNI4 L STA LU FS	EF OM3 UNI4 L STA LU FS	EF 008 UNI4 L STA LU FS
8 Fibre	EF 062 UNI8 L STA LU FS	EF 050 UNI8 L STA LU FS	EF OM3 UNI8 L STA LU FS	EF 008 UNI8 L STA LU FS
12 Fibre	EF 062 UNI12 L STA LU FS	EF 050 UNI12 L STA LU FS	EF OM3 UNI12 L STA LU FS	EF 008 UNI12 L STA LU FS
16 Fibre	EF 062 UNI16 L STA LU FS	EF 050 UNI16 L STA LU FS	EF OM3 UNI16 L STA LU FS	EF 008 UNI16 L STA LU FS
20 Fibre	EF 062 UNI20 L STA LU FS	EF 050 UNI20 L STA LU FS	EF OM3 UNI20 L STA LU FS	EF 008 UNI20 L STA LU FS
24 Fibre	EF 062 UNI24 L STA LU FS	EF 050 UNI24 L STA LU FS	EF OM3 UNI24 L STA LU FS	EF 008 UNI24 L STA LU FS

Fibre Selection

062 H62 | 050 H50 | OM3 Z50 | 008 D08

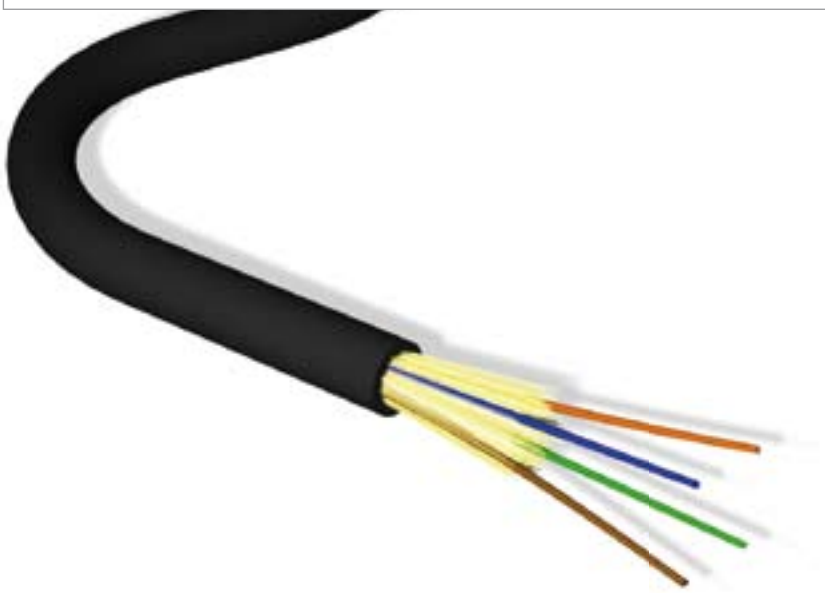
PRODUCT DESCRIPTION:

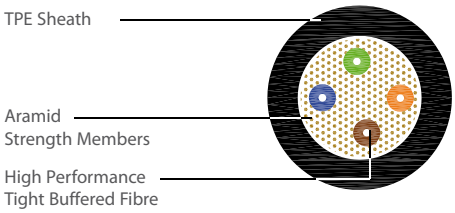
In today's business environment the secure backup of business critical systems in the event of an emergency is a pre-requisite. The UFS 01 Fire Survival cable is used in areas where critical data transmission must continue when the building or structure in which it is installed is on fire. For this reason its use in large public buildings such as datacentres, airports, railway stations, stadia and onshore/ offshore industrial structures is becoming increasingly common. The use of the cable in building management, fire and security systems means that these vital systems will remain functional in the event of a real life incident which requires an emergency evacuation.

PRODUCT PERFORMANCE:

Crush (N): 2500	Temp - Operation: -40°C to +70°C
Impact (Nm): 30	Temp - Storage: -40°C to +70°C
Torsion (turns / m): 1	Temp - Installation: -10°C to +70°C
Acid Gas Emissions: Pass	Fire: (IEC 60331-25) Pass (90 mins @ 750°C) (BSEN50200 -2000) Pass PH120
Smoke Index: Pass	

Tested in accordance with IEC 60794-1-2 unless stated





Suitable for Field Deployment
Approved to Def-Stan 60-1 part 3
Thermoplastic Elastomer Sheath

Brand-Rex Optical Cables - Universal TFD

Tight Buffered Field Deployable Cable

Product Data

	Diameter mm	Weight kg / km	Max Tensile Load N	Min Static Bend mm	Min Dynamic Bend mm
2 Fibre	5.00	25	2000	50	75
4 Fibre	5.50	28	2000	55	80

Product Part Numbering

	62.5/125	50/125	OM3	8/125
2 Fibre	HF 062 TFD02 TPE	HF 050 TFD02 TPE	HF OM3 TFD02 TPE	HF 008 TFD02 TPE
4 Fibre	HF 062 TFD04 TPE	HF 050 TFD04 TPE	HF OM3 TFD04 TPE	HF 008 TFD04 TPE

Fibre Selection

062 H62 | 050 H50 | OM3 Z50 | 008 D08

PRODUCT DESCRIPTION:

The TFD Field Deployable Cable is a military approved cable used for tactical cable applications. This type of cable is also used for outside broadcast media events which require high bandwidth optical cables for a reliable network in an extreme environment.

All universal TFD cables are constructed around the 900µm tight buffered elements which are suitable for direct termination.

PRODUCT PERFORMANCE:

Crush (N/cm):
200
Impact (Kg/100 impacts):
1
Torsion (turns / m):
5

Temp - Operation:
-55°c to +85°c
Temp - Storage:
-55°c to +85°c
Water Penetration:
≤3m @ 24 hours

Tested in accordance with IEC 60794-1-2 unless stated

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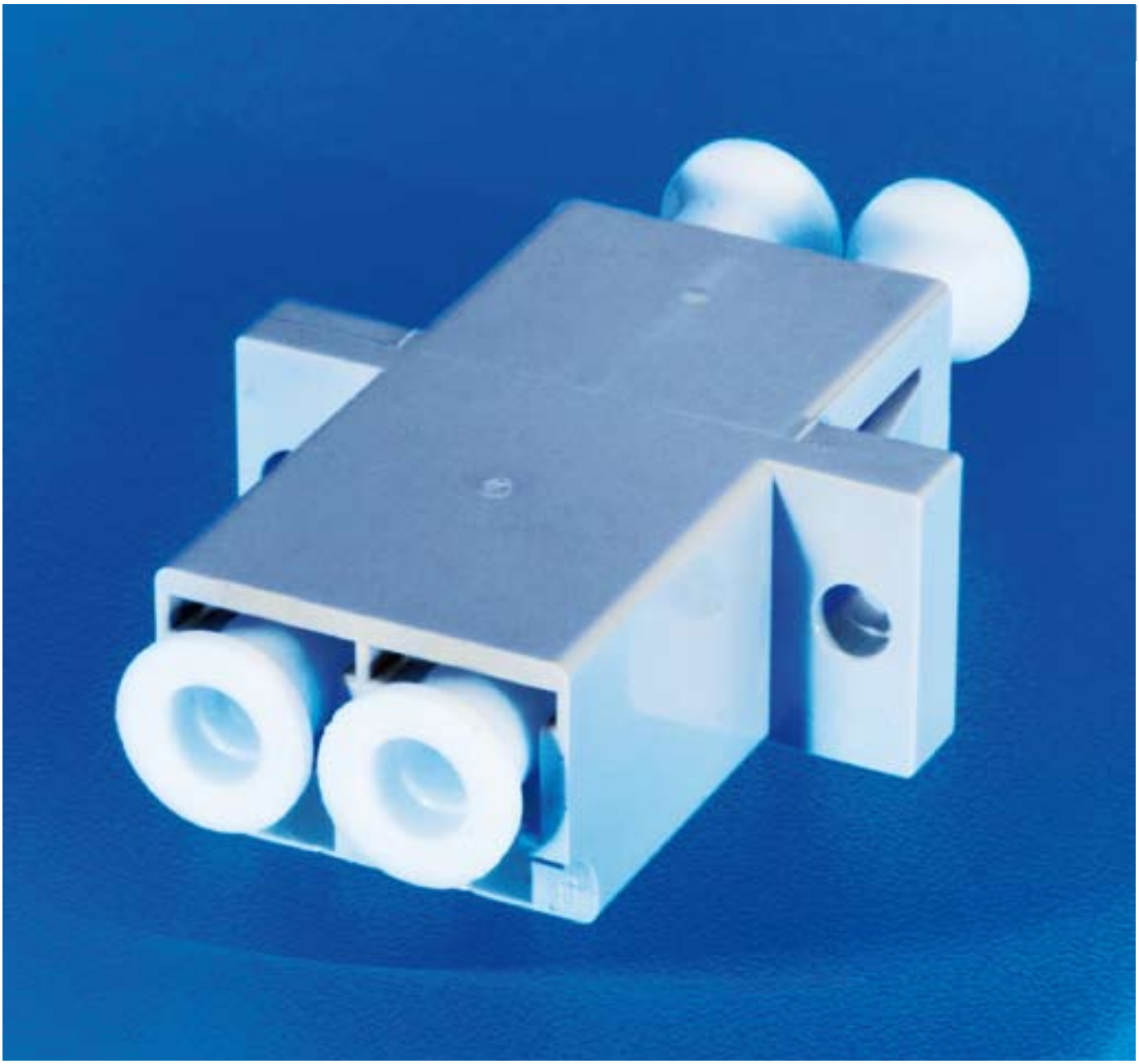
- GigaPlus Range
- Blolite AirBlown Fibre



FibrePlus is a comprehensive range of premium products including Single Mode and Multi Mode Pigtails and Patch cords using ST, SC, FC and Small Form Factor MT-RJ and LC Connectors and Adaptors.

All connectorised assembly types are available as either Multi Mode; OM1, OM2 and OM3 fibre grades and a Single Mode OS1. All are manufactured to comply with the international standards ISO 11801 : 2002, EN50173-1 : 2002 and ANSI/TIA/ETA 568B.

For rack management the Compact Plus Optical Patch Panel, Cable Management Plates and Modules offer a flexible cost effective solution with the ability to cater for growth and churn.

Available as an empty panel, suitable for all major connector types the product is able to manage up to 48 Fibres in 1U using Small Form Factor connectors.

The sliding shelf design along with other added features enable quick and easy reconfiguration, expansion making future upgrades and expansion both quicker and easier. Full Blolite support is part of the flexible future proofing designed into this product.

Pre-Connectorised Cable Assemblies, Wall outlets, Consumables, Termination Kits and Tools complete the range providing an end to end, in-building and campus cabling solutions.

Brand-Rex Optical Components - Patch Cords

62.5/12.5 Multi Mode Optical Patch Cords

Optical Performance (IEC 60874-1 Method 7)

	ST	SC	FC-PC	MT-RJ	LC
Insertion Loss Max dB	0.5	0.5	0.5	0.75	0.5
Insertion Loss Typical dB	0.2	0.2	0.2	0.4	0.2
Return Loss Min dB	20.0	20.0	20.0	20.0	20.0

Product Part Numbering

	1.00m	2.00m	3.00m	5.00m
FC - FC Duplex	HOPFC062010FC291	HOPFC062020FC291	HOPFC062030FC291	HOPFC062050FC291
LC - SC Duplex	HOPLC062010SC293	HOPLC062020SC293	HOPLC062030SC293	HOPLC062050SC293
LC - ST Duplex	HOPLC062010ST293	HOPLC062020ST293	HOPLC062030ST293	HOPLC062050ST293
LC - LC Duplex	HOPLC062010LC293	HOPLC062020LC293	HOPLC062030LC293	HOPLC062050LC293
MT-RJ - MT-RJ Duplex	HOPMJ062010MJ292	HOPMJ062020MJ292	HOPMJ062030MJ292	HOPMJ062050MJ292
MT-RJ - SC Duplex	HOPMJ062010SC292	HOPMJ062020SC292	HOPMJ062030SC292	HOPMJ062050SC292
MT-RJ - ST Duplex	HOPMJ062010ST292	HOPMJ062020ST292	HOPMJ062030ST292	HOPMJ062050ST292
LC - MT-RJ Duplex	HOPLC062010MJ292	HOPLC062020MJ292	HOPLC062030MJ292	HOPLC062050MJ292
SC - SC Duplex	HOPSC062010SC291	HOPSC062020SC291	HOPSC062030SC291	HOPSC062050SC291
SC - ST Duplex	HOPSC062010ST291	HOPSC062020ST291	HOPSC062030ST291	HOPSC062050ST291
ST - ST Duplex	HOPST062010ST291	HOPST062020ST291	HOPST062030ST291	HOPST062050ST291

Manufactured to comply with:
ISO/IEC 11801 : 2002,
EN50173 -1 : 2002,
ANSI TIA/EIA 568B

All major connector types
Colour coded for identification
Duplex patchcords feature 'Crossover'
OM1 Grade Fibre

PRODUCT DESCRIPTION:

For use in permanent connections between transmission equipment and patch panels or interconnect / cross connect between panels. Patch cords are pre-constructed with connectors. These include small form factors such as LC and MT-RJ as well as SC, FC and ST. Based on 2.80mm sub units (1.9mm SFF) these ruggedised cables are sheathed with LSZH material making them suitable for internal use.

CABLE PROPERTIES:

Crush (N):
1500
Impact (Nm):
5
Torsion (turns / m):
5
Fire:
IEC 60332-1

Temp - Operation:
-10°c to +70°c

Temp - Storage:
-25°c to +80°c

Temp - Installation:
0°c to +70°c

Sheath Colour:
Orange
(Others available on request)

Brand-Rex Optical Components - Patch Cords

50/125 Multi Mode Optical Patch Cords

Optical Performance (IEC 60874-1 Method 7)

	ST	SC	FC-PC	MT-RJ	LC
Insertion Loss Max dB	0.5	0.5	0.5	0.75	0.5
Insertion Loss Typical dB	0.2	0.2	0.2	0.4	0.2
Return Loss Min dB	20.0	20.0	20.0	20.0	20.0

Product Part Numbering

	1.00m	2.00m	3.00m	5.00m
FC - FC Duplex	HOPFC050010FC291	HOPFC050020FC291	HOPFC050030FC291	HOPFC050050FC291
LC - SC Duplex	HOPLC050010SC293	HOPLC050020SC293	HOPLC050030SC293	HOPLC050050SC293
LC - ST Duplex	HOPLC050010ST293	HOPLC050020ST293	HOPLC050030ST293	HOPLC050050ST293
LC - LC Duplex	HOPLC050010LC293	HOPLC050020LC293	HOPLC050030LC293	HOPLC050050LC293
MT-RJ - MT-RJ Duplex	HOPMJ050010MJ292	HOPMJ050020MJ292	HOPMJ050030MJ292	HOPMJ050050MJ292
MT-RJ - SC Duplex	HOPMJ050010SC292	HOPMJ050020SC292	HOPMJ050030SC292	HOPMJ050050SC292
MT-RJ - ST Duplex	HOPMJ050010ST292	HOPMJ050020ST292	HOPMJ050030ST292	HOPMJ050050ST292
LC - MT-RJ Duplex	HOPLC050010MJ292	HOPLC050020MJ292	HOPLC050030MJ292	HOPLC050050MJ292
SC - SC Duplex	HOPSC050010SC291	HOPSC050020SC291	HOPSC050030SC291	HOPSC050050SC291
SC - ST Duplex	HOPSC050010ST291	HOPSC050020ST291	HOPSC050030ST291	HOPSC050050ST291
ST - ST Duplex	HOPST050010ST291	HOPST050020ST291	HOPST050030ST291	HOPST050050ST291

Manufactured to comply with:
ISO/IEC 11801 : 2002,
EN50173 -1 : 2002,
ANSI TIA/EIA 568B

All major connector types
Colour coded for identification
Duplex patch cords feature 'Crossover'
OM2 Grade Fibre

PRODUCT DESCRIPTION:

For use in permanent connections between transmission equipment and patch panels or interconnect / cross connect between panels. Patch cords are pre-constructed with connectors. These include small form factors such as LC and MT-RJ as well as SC, FC and ST. Based on 2.80mm sub units (1.9mm SFF) these ruggedised cables are sheathed with LSZH material making them suitable for internal use.

CABLE PROPERTIES:

Crush (N):
1500

Impact (Nm):
5

Torsion (turns / m):
5

Fire:
IEC 60332-1

Temp - Operation:
-10°c to +70°c

Temp - Storage:
-25°c to +80°c

Temp - Installation:
0°c to +70°c

Sheath Colour:
Orange
(Others available on request)

Brand-Rex Optical Components - Patch Cords

50/125 OM3 Multi Mode Optical Patch Cords

Optical Performance (IEC 60874-1 Method 7)

	ST	SC	FC-PC	MT-RJ	LC
Insertion Loss Max dB	0.5	0.5	0.5	0.75	0.5
Insertion Loss Typical dB	0.2	0.2	0.2	0.4	0.2
Return Loss Min dB	20.0	20.0	20.0	20.0	20.0

Product Part Numbering

	1.00m	2.00m	3.00m	5.00m
FC - FC Duplex	HOPFCOM3010FC291	HOPFCOM3020FC291	HOPFCOM3030FC291	HOPFCOM3050FC291
LC - SC Duplex	HOPLCOM3010SC293	HOPLCOM3020SC293	HOPLCOM3030SC293	HOPLCOM3050SC293
LC - ST Duplex	HOPLCOM3010ST293	HOPLCOM3020ST293	HOPLCOM3030ST293	HOPLCOM3050ST293
LC - LC Duplex	HOPLCOM3010LC293	HOPLCOM3020LC293	HOPLCOM3030LC293	HOPLCOM3050LC293
MT-RJ - MT-RJ Duplex	HOPMJOM3010MJ292	HOPMJOM3020MJ292	HOPMJOM3030MJ292	HOPMJOM3050MJ292
MT-RJ - SC Duplex	HOPMJOM3010SC292	HOPMJOM3020SC292	HOPMJOM3030SC292	HOPMJOM3050SC292
MT-RJ - ST Duplex	HOPMJOM3010ST292	HOPMJOM3020ST292	HOPMJOM3030ST292	HOPMJOM3050ST292
LC - MT-RJ Duplex	HOPLCOM3010MJ292	HOPLCOM3020MJ292	HOPLCOM3030MJ292	HOPLCOM3050MJ292
SC - SC Duplex	HOPSCOM3010SC291	HOPSCOM3020SC291	HOPSCOM3030SC291	HOPSCOM3050SC291
SC - ST Duplex	HOPSCOM3010ST291	HOPSCOM3020ST291	HOPSCOM3030ST291	HOPSCOM3050ST291
ST - ST Duplex	HOPSTOM3010ST291	HOPSTOM3020ST291	HOPSTOM3030ST291	HOPSTOM3050ST291

Manufactured to comply with:
ISO/IEC 11801 : 2002,
EN50173 -1 : 2002,
ANSI TIA/EIA 568B

All major connector types
Colour coded for identification
Duplex patch cords feature 'Crossover'
OM3 Grade Fibre

PRODUCT DESCRIPTION:

For use in permanent connections between transmission equipment and patch panels or interconnect / cross connect between panels. Patch cords are pre-constructed with connectors. These include small form factors such as LC and MT-RJ as well as SC, FC and ST. Based on 2.80mm sub units (1.9mm SFF) these ruggedised cables are sheathed with LSZH material making them suitable for internal use.

CABLE PROPERTIES:

Crush (N):
1500
Impact (Nm):
5
Torsion (turns / m):
5
Fire:
IEC 60332-1

Temp - Operation:
-10°c to +70°c
Temp - Storage:
-25°c to +80°c
Temp - Installation:
0°c to +70°c
Sheath Colour:
Orange
(Others available on request)

Brand-Rex Optical Components - Patch Cords

Single Mode Optical Patch Cords

Optical Performance (IEC 60874-1 Method 7)

	ST	SC	FC-PC	MT-RJ	LC
Insertion Loss Max dB	0.3	0.3	0.3	0.75	0.3
Insertion Loss Typical dB	0.2	0.2	0.2	0.4	0.1
Return Loss Min dB	45.0	45.0	45.0	26.0	45.0

Product Part Numbering

	1.00m	2.00m	3.00m	5.00m
FC - FC Duplex	HOPFC008010FC201	HOPFC008020FC201	HOPFC008030FC201	HOPFC008050FC201
LC - SC Duplex	HOPLC008010SC203	HOPLC008020SC203	HOPLC008030SC203	HOPLC008050SC203
LC - ST Duplex	HOPLC008010ST203	HOPLC008020ST203	HOPLC008030ST203	HOPLC008050ST203
LC - LC Duplex	HOPLC008010LC203	HOPLC008020LC203	HOPLC008030LC203	HOPLC008050LC203
MT-RJ - MT-RJ Duplex	HOPMJ008010MJ202	HOPMJ008020MJ202	HOPMJ008030MJ202	HOPMJ008050MJ202
MT-RJ - SC Duplex	HOPMJ008010SC202	HOPMJ008020SC202	HOPMJ008030SC202	HOPMJ008050SC202
MT-RJ - ST Duplex	HOPMJ008010ST202	HOPMJ008020ST202	HOPMJ008030ST202	HOPMJ008050ST202
LC - MT-RJ Duplex	HOPLC008010MJ202	HOPLC008020MJ202	HOPLC008030MJ202	HOPLC008050MJ202
SC - SC Duplex	HOPSC008010SC201	HOPSC008020SC201	HOPSC008030SC201	HOPSC008050SC201
SC - ST Duplex	HOPSC008010ST201	HOPSC008020ST201	HOPSC008030ST201	HOPSC008050ST201
ST - ST Duplex	HOPST008010ST201	HOPST008020ST201	HOPST008030ST201	HOPST008050ST201

Manufactured to comply with:
ISO/IEC 11801 : 2002,
EN50173 -1 : 2002,
ANSI TIA/EIA 568B

All major connector types
Colour coded for identification
Duplex patch cords feature 'Crossover'
OS1 Grade Fibre

PRODUCT DESCRIPTION:

For use in permanent connections between transmission equipment and patch panels or interconnect / cross connect between panels. Patch cords are pre-constructed with connectors. These include small form factors such as LC and MT-RJ as well as SC, FC and ST. Based on 2.80mm sub units (1.9mm SFF) these ruggedised cables are sheathed with LSZH material making them suitable for internal use.

CABLE PROPERTIES:

Crush (N):
1500
Impact (Nm):
5
Torsion (turns / m):
5
Fire:
IEC 60332-1

Temp - Operation:
-10°c to +70°c
Temp - Storage:
-25°c to +80°c
Temp - Installation:
0°c to +70°c
Sheath Colour:
Yellow

Single Mode and Multi Mode Optical Pigtails

Optical Performance (IEC 60874-1 Method 7)

	ST	SC	FC-PC	MT-RJ	LC MM/SM
Insertion Loss Max dB	0.5	0.5	0.5	0.75	0.5/0.3
Insertion Loss Typical dB	0.2	0.2	0.2	0.4	0.2/0.1
Multi Mode Return Loss Min dB	20.0	20.0	20.0	20.0	20.0
Single Mode Return Loss Min dB	45.0	45.0	45.0	45.0	45.0

Product Colour Coding

62.5/125	50/125	OM3	8/125
Blue	Green	Grey	Yellow
Blue/Orange (MT-RJ)	Green/Brown (MT-RJ)	Grey/Orange (MT-RJ)	Yellow/Green (MT-RJ)

Product Part Numbering

	62.5/125	50/125	OM3	8/125
FC - 1 metre	HOTFC062001	HOTFC050001	HOTFCOM3001	HOTFC008001
SC - 1 metre	HOTSC062001	HOTSC050001	HOTSCOM3001	HOTSC008001
ST - 1 metre	HOTST062001	HOTST050001	HOTSTOM3001	HOTST008001
LC - 1 metre	HOTLS062001	HOTLS050001	HOTLSOM3001	HOTLS008001
MT-RJ - 1 metre	HOTMJ062501	HOTMJ050501	HOTMJOM3501	HOTMJ008501

Manufactured to comply with:
ISO/IEC 11801 : 2002,
EN50173 -1 : 2002,
ANSI TIA/EIA 568B

Based on Tight Buffered Core
900µm and 600µm
All major connector types
All major fibre types
Colour coded for identification

PRODUCT DESCRIPTION:
For use in permanent connections between patch panels and incoming cables / single blown fibres. Pigtails are pre-constructed with connectors. Connector options include small form factors such as LC and MT-RJ as well as SC, FC and ST. Based on 900µm tight buffered cores (600µm MT-RJ) and suitable for internal use only inside suitable Fibre Management Systems.

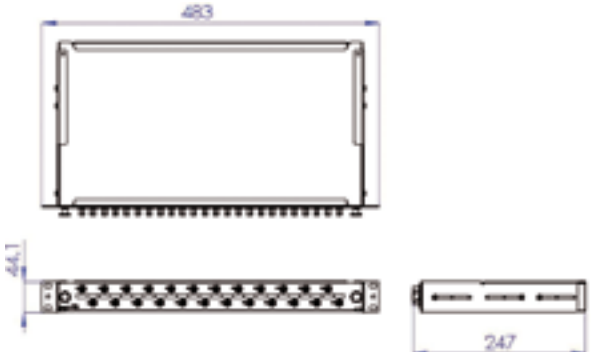
CABLE PROPERTIES:

Crush (N):
800
Impact (Nm):
0.2
Min Bend (mm):
50

Temp - Operation:
-10°c to +70°c
Temp - Storage:
-25°c to +80°c
Temp - Installation:
0°c to +70°c

Brand-Rex Optical Components - Compact Plus Patch Panels

Compact Plus - Unloaded Panels & Panel Options



Enhanced sliding tray for easy access complete with quick release fastenings

Adjustable mounting brackets aids installation within shallow enclosures

Minimum depth 235mm

Rear of panel offers a range of apertures to accommodate a variety of gland configurations

Front panel configuration options:
24 way ST,SC, FC-PC, LC and MT-RJ
48 way Duplex SC, Duplex LC or MT-RJ

- Unloaded panels are supplied with cable management and glands (FPCFMKIT001)
- Purpose designed panel base allows for customised fibre management and additional anchoring points for incoming cables or ducts
- Front face of the panel includes a port identification strip
- Compatible with Blolite

PRODUCT DESCRIPTION:

The new fibre plus 1U fibre 19" Optic Patch Panel has been redesigned to optimise both the internal fibre management but also to add greater fibre density. Constructed from mild steel with a powder coated paint finish the panel is available in Black or Grey. The Patch Panel offers a flexible and highly versatile solution for optical splicing and patching. The panels shallow depth allows it to be installed within the majority of standard racks and wall mounted enclosures. The integrated design features ensure that even once installed the panel can be readily re-configured to accommodate the changing needs of today's high speed networks.

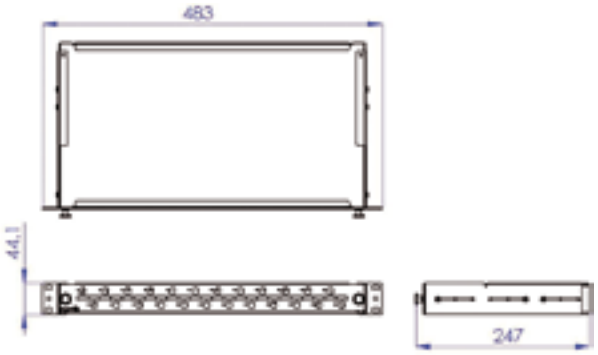
Product Part Numbering

Description	
Unloaded Optical for up to 24 ST or FC adaptors - Black	FPCC1SXXX24ST2
Unloaded Optical for up to 12 SC Duplex adaptors - Black	FPCC1SXXX24DC2
Unloaded Optical for up to 24 SC Duplex adaptors - Black	FPCC1SXXX48DC2
Unloaded Optical for up to 24 SC Simplex adaptors - Black	FPCC1SXXX24SC2
Fibre management kit including loops and 24 way splice bridge	FPCFMKIT001
3mm Bloduct bulkhead connector (including adaptor collar)	30-511-04
5mm Bloduct bulkhead connector	30-506-09
Blolite Tie Bracket 12w 5mm, including mounting kit	FPCBKIT001
1/2 Blanck Tie Bracket	FPCBBLK001
ST/FC Blanking Plugs (Black) - Pack 100	BPEST101-100
SC Simplex Blanking Plug (also suitable for LC & MT-RJ) (Black) - Pack 100	BPESC101-100
SC Duplex Blanking Plug (also suitable for LC & MT-RJ) (Black) - Pack 100	BPESC301-100

*Notes: *Panels are also avaialble in grey, to order please replace the '2' in the catalogue number with '8'. i.e. FPCC1SXSM04ST2 becomes FPCC1SXSM04ST8*

Brand-Rex Optical Components - Compact Plus Patch Panels

Compact Plus - Part Loaded Panels



Compact Plus Panels are pre loaded with Fibre Optic adaptors

Front Panel for up to 24way FC, ST, SC 12 way DC, 48way LC, MT-RJ

Minimum depth 235mm

Front Panel includes a port identification strip

Suitable for Blolite

PRODUCT DESCRIPTION:

The new fibre plus 19" 1U fibre Optic Patch Panel has been redesigned to optimise both the internal fibre management but also to add greater fibre density. Constructed from mild steel with a powder coated paint finish the panel is available in Black or Grey. The Patch Panel offers a flexible and highly versatile solution for optical splicing and patching. The panel's shallow depth allows it to be installed within the majority of standard racks and wall mounted enclosures. The integrated design features ensure that even once installed the panel can be readily re-configured to accommodate the changing needs of today's high speed networks.

Product Part Numbering

Description	4 Adaptor	6 Adaptor	8 Adaptor	12 Adaptor	16 Adaptor	24 Adaptor
ST Single Mode	FPCC1SXSM04ST2	FPCC1SXSM06ST2	FPCC1SXSM08ST2	FPCC1SXSM12ST2	FPCC1SXSM16ST2	FPCC1SXSM24ST2
ST Multi Mode	FPCC1SXMM04ST2	FPCC1SXMM06ST2	FPCC1SXMM08ST2	FPCC1SXMM12ST2	FPCC1SXMM16ST2	FPCC1SXMM24ST2
FC Single Mode	FPCC1SXSM04FC2	FPCC1SXSM06FC2	FPCC1SXSM08FC2	FPCC1SXSM12FC2	FPCC1SXSM16FC2	FPCC1SXSM24FC2
SC Duplex - Single Mode	FPCC1SXSM08DC2	FPCC1SXSM12DC2	FPCC1SXSM16DC2	FPCC1SXSM24DC2	FPCC1SXSM32DC2	FPCC1SXSM48DC2
SC Duplex - Multi Mode	FPCC1SXMM08DC2	FPCC1SXMM12DC2	FPCC1SXMM16DC2	FPCC1SXMM24DC2	FPCC1SXMM32DC2	FPCC1SXMM48DC2
SC Simplex Single Mode	FPCC1SXSM04SC2	FPCC1SXSM06SC2	FPCC1SXSM08SC2	FPCC1SXSM12SC2	FPCC1SXSM16SC2	FPCC1SXSM24SC2
SC Simplex Multi Mode	FPCC1SXMM04SC2	FPCC1SXMM06SC2	FPCC1SXMM08SC2	FPCC1SXMM12SC2	FPCC1SXMM16SC2	FPCC1SXMM24SC2
MT-RJ	FPCC1SXMM08MJ2	FPCC1SXMM12MJ2	FPCC1SXMM16MJ2	FPCC1SXMM24MJ2	FPCC1SXMM32MJ2	FPCC1SXMM48MJ2
LC Duplex Single Mode	FPCC1SXSM08LC2	FPCC1SXSM12LC2	FPCC1SXSM16LC2	FPCC1SXSM24LC2	FPCC1SXSM32LC2	FPCC1SXSM48LC2
LC Duplex Multi Mode	FPCC1SXMM08LC2	FPCC1SXMM12LC2	FPCC1SXMM16LC2	FPCC1SXMM24LC2	FPCC1SXMM32LC2	FPCC1SXMM48LC2

SC Simplex Connector:
SC multimode and single mode connector kits comprise of a one piece SC body with precision ceramic ferrule, crimp, sleeve, colour coded outer shroud, 2 x colour coded 3mm strain relief boots and a 0.9mm boot.

Compliant with IEC60874-14
Typical Insertion Loss: MM - 0.2dB, SM - 0.15dB
Minimum Return Loss: SM 45dB

SC Simplex Adaptor:
SC Adaptors comprise of a polymer outer body and inner assembly fitted with a precision alignment sleeve. Multimode with metal sleeve. Single mode with Ceramic Sleeve.

Compliant with IEC 60875-14
Max. Insertion Loss: MM - 0.3dB, SM - 0.1dB

SC Duplex Connector:
SC Duplex connector kits comprise of 2 simplex connectors mounted in a two piece polymer clip and 2 x colour coded 3mm strain relief boots.

Compliant with IEC 60874-14
Typical Insertion Loss: MM - 0.2dB, SM - 0.15dB
Minimum Return Loss: SM 45dB

SC Duplex Adaptor:
SC Duplex adaptors comprise of a polymer outer body and an inner assembly fitted with a precision alignment sleeve.
Multimode with metal sleeve. Single mode with Ceramic Sleeve.

Compliant with IEC 60875-14
Max. Insertion Loss: MM - 0.3dB, SM - 0.1dB

Brand-Rex Optical Components - Connectors
SC Optical Connectors

Product Part Numbering

	Connector	Adaptor
SC - MultiMode (Beige)	FOCSCEPMM001	BHCSCMM001
SC - Single Mode (Blue)	FOCSCEPSM001	BHCSCSM001
SC Duplex - Multi Mode (Beige)	FOCDCEPMM001	BHCDCMM001
SC Duplex - Single Mode (Blue)	FOCDCEPSM001	BHCDCSM001

SC Duplex Clip - Multi Mode (Beige)	FOCSCKLBE
SC Duplex Clip - Single Mode (Blue)	FOCSCKLBU

ST Connector:
ST connector kits comprise of a nickel plated zinc coupling body with a precision ceramic ferrule, crimp sleeve, 2 x colour coded 3mm strain reliefs and a 0.9mm boot.

Compliant with IEC 60874-10
Strain Relief Colour Code: MM - Red, Black
SM - Yellow, Black
Typical Insertion Loss: MM - 0.2dB, SM - 0.15dB
Minimum Return Loss: SM 45dB

ST Adaptor:
ST adaptors comprise of a nickel plated zinc die cast body with a precision alignment sleeve. They are both standard and double 'D' hole compatible. Multimode with metal sleeve. Single mode with ceramic sleeve.

Compliant with IEC 60875-10
Max. Insertion Loss: MM - 0.3dB, SM - 0.1dB

FC-PC Connector:
FC-PC single mode connector kits comprise of a nickel plated brass body with a precision ceramic ferrule, stepped crimp sleeve, 2 x colour coded strain relief boots and a 0.9mm boot.

Compliant with IEC 60874-7
Strain Relief Colour Code: SM - Yellow, Black
Typical Insertion Loss: SM - 0.15dB
Minimum Return Loss: SM 45dB

FC Adaptor:
FC adaptors comprise of a nickel plated brass body that is fitted with a precision alignment sleeve. They are standard single and double 'D' hole compatible.

Compliant with IEC 60875-7
Max. Insertion Loss: SM - 0.1dB

Brand-Rex Optical Components - Connectors
ST, FC Optical Connectors

Product Part Numbering

	Connector	Adaptor
ST - Multi Mode	FOCSTEPMM001	BHCSTMM001
ST Single Mode	FOCSTEPSM001	BHCSTSM001
FC-PC Single Mode	FOCFCEPSM001	BHCFCSM001

PRODUCT DESCRIPTION:

The range of Brand-Rex SFF (Small Form Factor) connectivity solutions are reliable and robust, quality products. SFF connectors are duplex fibre connectors which have a footprint similar to RJ-45's, offering the system integrator / installer an improved patching density, saving valuable rack space. The products can be used at the panel or in the work area supporting both backbone fibre and fibre to the desk solutions. Brand-Rex offers a choice of leading, de-facto, SFF connectors, the MT-RJ and the LC. The MT-RJ is also available as field installable.

MT-RJ Duplex Connector:

MT-RJ connectors are available in male (with guide pins) or female (without) and are supplied with oval crimp sleeve, outer shroud, strain relief boot and a short buffer boot.

Typical Insertion Loss: MM - <0.3dB, SM - <0.7dB
Minimum Return Loss: MM 22dB, SM 26dB

MT-RJ Duplex Adaptor:

MT-RJ adaptors have a polymer outer body which has the outer dimensions of a simplex SC sized adaptor.

LC Connector:

LC multimode and single mode connector kits comprise of a precision ferrule, crimp sleeve, colour coded outer shroud, 2 x colour coded 2.0mm strain reliefs (..001) or a 0.9mm (..002) boot.

Typical Insertion Loss: MM - <0.2dB, SM - <0.15dB
Minimum Return Loss: MM 20dB, SM 45dB

Available as either simplex or duplex variants.

Brand-Rex Optical Components - Connectors

Small Form Factor Connectors LC/MT RJ

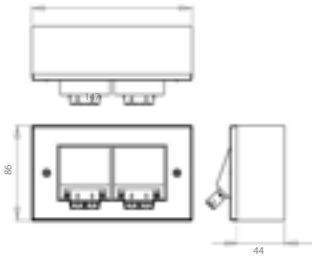
Product Part Numbering

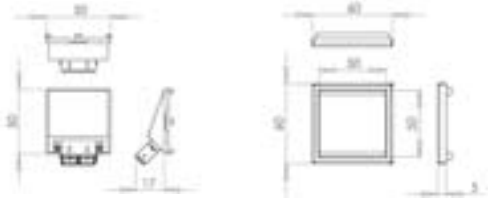
	Connector	Adaptor
LC Multi Mode (Duplex) (Beige)	FOCLCEPMM001	BHCLCMM001
LC Single Mode (Duplex) (Blue)	FOCLCEPSM002	BHCLCSM00
LC Multi Mode (Simplex) (Beige)	FOCLSEPMM002	-
LC Single Mode (Simplex) (Blue)	FOCLSEPSM001	-
MT-RJ Multi Mode (Male)	FOCMJEPMM001	BHCMJXX001
MT-RJ Single Mode (Male)	FOCMJEPSM001	BHCMJXX001
MT-RJ Multi Mode (Female)	FOCMJEPMM002	BHCMJXX001
MT-RJ Single Mode (Female)	FOCMJEPSM002	BHCMJXX001
MT-RJ Multi Mode - Field Install	FOCMJFI050001	BHCMJXX001
MT-RJ Multi Mode - Field Install	FOCMJFI062001	BHCMJXX001
MT-RJ Single Mode - Field Install	FOCMJFI008001	BHCMJXX001

LC Duplex Adaptor:

LC adaptors comprise of a polymer body with a precision alignment sleeves. They have the outer dimensions of a simplex SC sized adaptor.

Brand-Rex Optical Components - Wall and Floor Outlets





Available for most connector types; SC Simplex, SC Duplex, ST, LC, MT-RJ

Allows up to 2 Fibre Terminations per Module (Small Form Factor all 4 Fibres per Module)

Angled Fibre Optic Module supplied with Adaptors

Compatible Standard Modular Wall Mounted Faceplates

PRODUCT DESCRIPTION:

A range of wall and floor mounted angled housings for use with fibre optic terminations, designed for mounting on a standard modular range faceplate or adaptor collar.

Product Part Numbering

	Multi-Mode	Single-Mode
50 x 50 mm Angled Module with 2 x ST Adaptors	MFCSTMM001	MFCSTSM001
50 x 50 mm Angled Module with an SC Duplex Adaptor	MFCDCMM001	MFCDCSM001
50 x 50 mm Angled Module with 2 x LC Adaptors	MFCLCMM001	MFCLCSM001
50 x 50 mm Angled Module with 2 x MT-RJ Adaptors	MFCMJXM001	MFCMJXM001
50 x 50 mm Angled Module with 2 x FC/PC Adaptors	-	MFCFCSM001
86 x 147 mm Double Gang Modular Faceplate	MMCWDOUNI031	
44 mm deep Double Gang UK Backbox	MMCDGBB44002	
60 x 60 mm Adaptor Collar	TAC2W	

PRODUCT DESCRIPTION:
Brand-Rex offers a range of termination kits for epoxy-polish type connectors. The Starter Kit is a comprehensive tool kit, which includes all the tools necessary to achieve quality terminations in the workshop, lab or on-site. The FibrePlus Tool Wallet contains all the hand tools necessary for preparing and terminating Brand-Rex ST/SC/FC connectors, and the Conversion Kit consists of the correct crimp tool and polishing puck for Brand-Rex SC/ST/FC connectors.

Brand-Rex supplies field installation tool kits for the SFF connector range. A polishing puck for LC connectors is available for epoxy polish terminations. Various field termination kits are also available for the field installable product range.

FibrePlus Starter Kit:
The FibrePlus Starter Kit contains: Consumable kits for 1000 terminations, Sheath stripper small - (up to 3mm), Sheath stripper medium (3 - 5.5mm), Sheath stripper large (6.5 - 14mm), No Nik stripper for 900 µm buffer, Clauss stripper for 250 µm fibre coating, Crimp tool for BR ST/SC/FC connectors, Kevlar Scissors, Scribe, Polishing Puck for ST/SC/FC connectors, x3 Rubber pads for hand polishing, 6 position curing oven with power supply, Water bottle for polishing liquid, Sharps disposal bin, Safety Glasses, Mains adaptor for UK to Euro, ST/SC/FC Inspection MicroScope (x200).

FibrePlus Tool Wallet:
The FibrePlus Tool Wallet contains: Sheath stripper small - (up to 3mm), Sheath stripper medium (3 - 5.5mm), Sheath stripper large (6.5 - 14mm), No Nik stripper for 900 µm buffer, Clauss stripper for 250 µm fibrecoating, Crimp tool for Brand-Rex ST/SC/FC connectors, Kevlar Scissors, Scribe, Polishing Puck for ST/SC/FC connectors.

Brand-Rex Optical Components - Consumables and Tools
Consumables and Tools

Product Part Numbering

	Part Number
FibrePlus Starter Kit	HELTKITEP001
FibrePlus Tool Wallet	HELTKITEP002

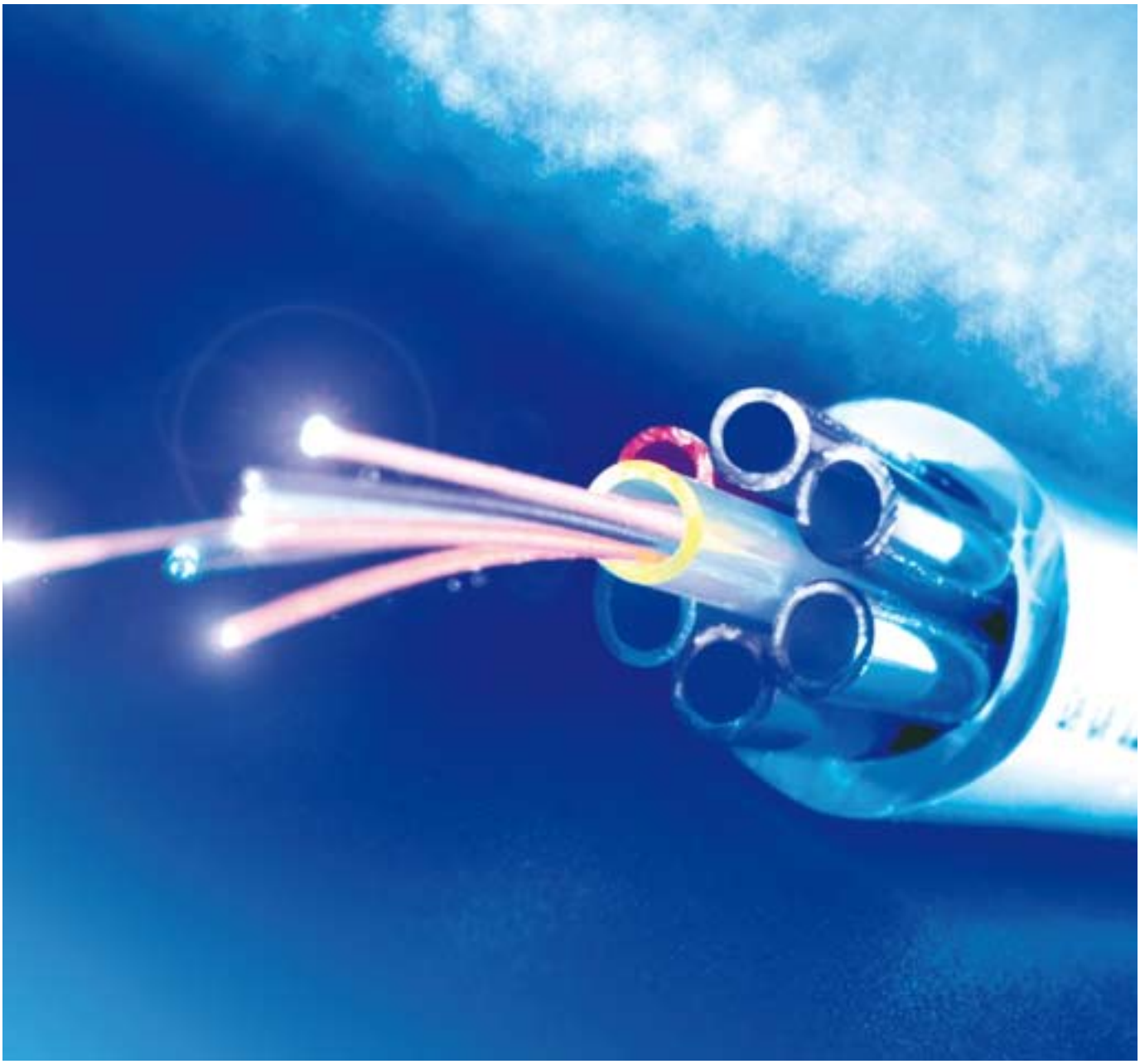
FibrePlus 500 Termination Consumable Kit:
The FibrePlus 500 Termination Consumable Kit contains: Polishing film, epoxy, cleaning solvent and tissues sufficient for 500 on-site terminations.

FibrePlus 50 Termination Consumable Kit:
The FibrePlus 50 Termination Consumable Kit contains: Polishing film, epoxy, cleaning solvent and tissues sufficient for 50 on-site terminations.

FibrePlus Conversion Kit:
The FibrePlus Conversion Kit contains: Connector crimp tool and polishing puck for Brand-Rex ST/SC/FC connectors.

Product Part Numbering

	Part Number
500 Termination Consumable Kit	HELACCEP001
50 Termination Consumable Kit	HELACCEP002
FibrePlus Conversion Kit	HELTKITEP003



Customer requirements in the ever-advancing communications market continues to grow, stretching scarce bandwidth resources and truly testing the performance of today's networks.

In choosing cabling system solutions, whether for small, medium or large multi site locations, server farms or co-location datacentres, network planners have some serious issues to consider. Among these is the decision as to which type and mix of fibre to install to allow for network expansion and upgrades has been a dilemma for many years.

In the past, industry practice has been to install 'dark fibre' to meet future demands, however, this strategy is by no means risk-free as unterminated, untested fibres may not be fit for purpose when the time comes to light the fibres in the future. Fortunately there is a simple and cost effective solution - Brand-Rex Air Blown Fibre Systems offer solutions Internal and External applications with their market leading system Blolite. The use of Air Blown Fibre Systems gives complete freedom from risk by pre-installing a ducting route and then blowing in the fibre element (and paying for it) only when required.

The Blolite system was one of the first Air Blown Fibre systems, it is also regarded as the 'industry standard' Air Blown Fibre System. The Blolite system is very versatile with backbone and / or fibre to the desk links and can even allow for long distance link of up to 1km. Blolite is easily installed, by using compressed air, there is no disruption to the workplace, Blolite fibres are simply terminated and are compatible with all standard optical connectors.

Blolite is also extremely reliable, with a zero failure rate since the first installations in 1988 - truly an 'insurance policy' for high speed networks. It is no surprise that major users such as Manchester Airport, IBM, Ericsson, ABN Amro, the British MoD, Aerospatiale, Pfizer and even the US Navy have taken advantage of the system.

Brand-Rex Air Blown Fibre - Blolite

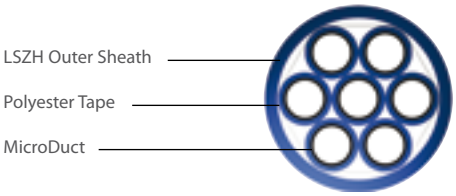
Blolite Internal MultiDucts

Product Data

	Diameter mm	Weight kg / km	Max Tensile Load N	Min Static Bend mm
1w 3mm (PO) - I	5.0	29	70	25
4w 3mm (PO) - I	9.3	67	150	93
7w 3mm (PO) - I	11.7	89	400	113
12w 3mm (PO) - I	15.2	126	500	152
19w 3mm (PO) - I	17.7	165	1000	173
Single 5mm MicroDuct	5.0	15	50	25
2w 5mm (LSZH) - I	7.5 x 13.0	100	300	40
4w 5mm (LSZH) - I	15.2	157	500	128
7w 5mm (LSZH) -I	18.6	203	700	180
12w 5mm (LSZH) - I	24.0	280	1150	350
19w 5mm (LSZH) -I	29.6	415	1650	410
Single 8mm MicroDuct	8.0	50	120	40
2w 8mm (LSZH) - I	10.5 x 19.0	173	600	80
4w 8mm (LSZH) - I	23.0	305	1000	180
7w 8mm (LSZH) - I	27.6	384	1500	270
12w 8mm (LSZH) -I	36.0	598	1500	360

Product Part Numbering

	3.00mm	5.00mm	8.00mm
Single MicroDuct	n/a	20-0101-00	20-0104-00
1 Way MultiDuct	20-0103-06	n/a	n/a
2 Way MultiDuct	n/a	20-0201-06	20-0204-06
4 Way MultiDuct	20-0403-06	20-0401-06	20-0404-06
7 Way MultiDuct	20-0703-06	20-0701-06	20-0704-06
12 Way MultiDuct	20-1203-06	20-1201-06	20-1204-06
19 Way MultiDuct	20-1903-06	20-1901-06	n/a



Available with 3mm, 5mm or 8mm MicroDucts

Non Metallic Design

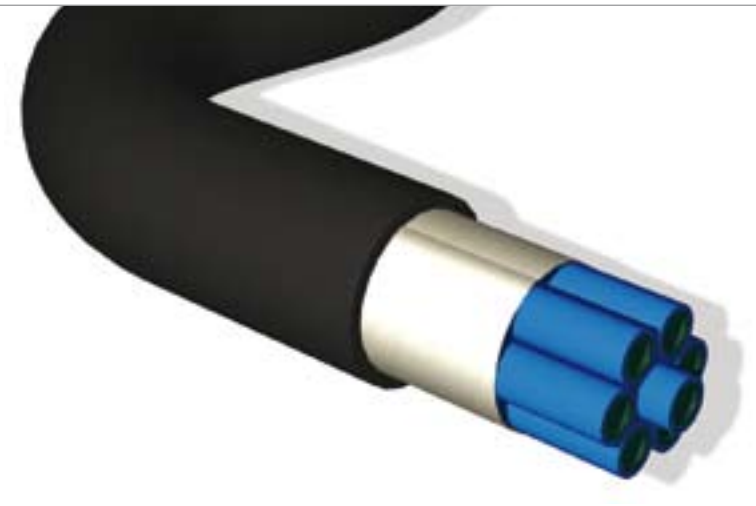
Simple MicroDuct Identification

PRODUCT DESCRIPTION:

To facilitate the installation of Blolite single blown fibres a range of multi-way MicroDucts into which Blolite fibres, can be blown are available. The internal range of these MultiDucts are constructed with the standard Blolite MicroDuct surrounded with a layer of polyester tape and a LSZH outer sheath making them suitable for internal applications.

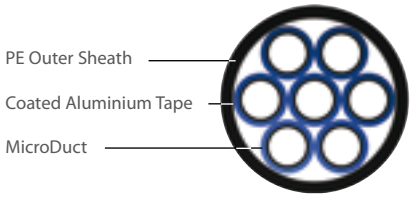
PRODUCT PERFORMANCE:

Fire:	IEC 60332-1
Temp - Operation:	-20°c to +60°c
Temp - Storage:	-40°c to +80°c
Temp - Installation	-10°c to +70°c



Brand-Rex Air Blown Fibre - Blolite

Blolite External MultiDucts



Product Data

	Diameter mm	Weight kg / km	Max Tensile Load N	Min Static Bend mm
1w 5mm (LSZH) - O	7.5	38	380	40
2w 5mm (LSZH) - O	7.5 x 13.0	98	630	60
4w 5mm (LSZH) - O	15.2	139	900	180
7w 5mm (LSZH) - O	18.6	200	1250	250
12w 5mm (LSZH) - O	24.0	307	1800	310
19w 5mm (LSZH - O	29.6	433	2600	370
1w 8mm (LSZH) - O	10.5	68	450	80
2w 8mm (LSZH) - O	10.5 x 19.0	169	800	95
4w 8mm (LSZH) - O	23.0	252	1250	280
7w 8mm (LSZH) - O	27.6	375	1750	380
12w 8mm (LSZH) - O	36.0	588	2000	540

Available with 5mm or 8mm MicroDucts

Aluminium Moisture Barrier

MicroDuct Numbered for Identification

PRODUCT DESCRIPTION:

To facilitate the installation of Blolite single blown fibres a range of multi-way MicroDucts into which Blolite fibres can be blown are available. The external range of these MultiDucts are constructed with the standard Blolite LSZH MicroDuct surrounded with a layer of coated aluminium tape and a Polyethylene outer sheath making them suitable for external applications.

PRODUCT PERFORMANCE:

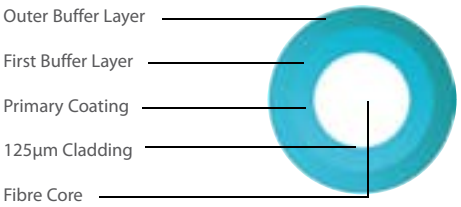
Temp - Operation:	-20°c to +60°c
Temp - Storage:	-40°c to +80°c
Temp - Installation:	-10°c to +70°c

Product Part Numbering

	5.00mm	8.00mm
1 Way MultiDuct	21-0101-02	21-0104-02
2 Way MultiDuct	21-0201-02	21-0204-02
4 Way MultiDuct	21-0401-02	21-0404-02
7 Way MultiDuct	21-0701-02	21-0704-02
12 Way MultiDuct	21-1201-02	21-1204-02
19 Way MultiDuct	21-1901-02	n/a

MicroDuct Size Selection Guidelines - Size vs Fibre Count

Single Blown Fibre Elements



Unique 'Blowable' coating

12 Standard Colours

Installation up to 1000m

PRODUCT DESCRIPTION:

The Blolite+ system offers a complete range of high quality single mode and multimode optical fibres, with a blowable coating and having a finished size of 500 µm. The Blolite+ fibre is strippable with standard tools and is compatible with standard connector types.

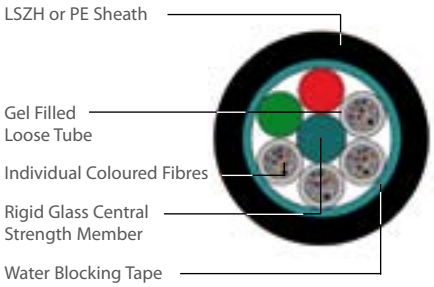
Fibre is available in twelve standard colours and is supplied on plastic spools in 1km, 2km, 3km or 4km lengths for installation into Blolite+ 3mm, 5mm and 8mm MicroDuct by trained and licensed Blolite+ installers using the IM2000 blow head.

MicroDuct Size Selection Guidelines

Blowing Distance (Metres)	1 Fibre	2 Fibre	4 Fibre	6 Fibre	8 Fibre	12 Fibre
100	3mm	3mm	3mm	5mm	5mm	5mm
200	3mm	3mm	3mm	5mm	5mm	5mm
300	3mm	3mm	3mm	5mm	5mm	5mm
400	3mm	3mm	5mm	5mm	5mm	5mm
500	3mm	3mm	5mm	5mm	5mm	8mm
600	8mm	8mm	8mm	8mm	8mm	-
700	8mm	8mm	8mm	8mm	8mm	-
800	8mm	8mm	8mm	8mm	8mm	-
900	8mm	8mm	8mm	8mm	8mm	-
1000	8mm	8mm	8mm	8mm	8mm	-

Product Part Numbering

	62.5/125	50/125	OM3	8/125
White	10-0101-03	10-0005-03	10-0003-03	10-0200-03
Black	10-0101-05	10-0005-05	10-0003-05	10-0200-05
Blue	10-0101-06	10-0005-06	10-0003-06	10-0200-06
Orange	10-0101-07	10-0005-07	10-0003-07	10-0200-07
Green	10-0101-08	10-0005-08	10-0003-08	10-0200-08
Red	10-0101-09	10-0005-09	10-0003-09	10-0200-09
Grey	10-0101-10	10-0005-10	10-0003-10	10-0200-10
Yellow	10-0101-11	10-0005-11	10-0003-11	10-0200-11
Brown	10-0101-12	10-0005-12	10-0003-12	10-0200-12
Violet	10-0101-13	10-0005-13	10-0003-13	10-0200-13
Pink	10-0101-14	10-0005-14	10-0003-14	10-0200-14
Turquoise	10-0101-15	10-0005-15	10-0003-15	10-0200-15



Brand-Rex Air Blown Fibre - Blolite+

12-72 Fibre Blown Micro Cable

PRODUCT DESCRIPTION:

Microduct cabling systems are popular solutions for building flexibility into a network, they can be populated when needed and leave spare capacity for future growth. The ability to defer initial installation costs is a key advantage of an air blown cable installation over traditional cable installations.

The new Blolite+ air blown loose tube microduct cable is available with fibre counts from 12 to 72 in a 6.2 mm diameter package. The micro cable is constructed of a non metallic, resin bonded glass central strength member and high density polyethylene sheath. The cable has been specifically designed and developed for improved installation efficiency in pre-installed 10/8 mm microducts using existing air blown installation techniques. Dry water blocking technology ensures the cable cores are fully water blocked.

PRODUCT CHARACTERISTICS:

Crush:	700N
Maximum Tensile Load:	450N
Minimum Bend Radius:	124mm
Weight:	25 kg/km
Temp - Operation:	-15°C to +60°C
Temp - Storage:	-30°C to +70°C
Temp - Installation:	-10°C to +40°C
Water Penetration:	<3m @ 24h

Product Data

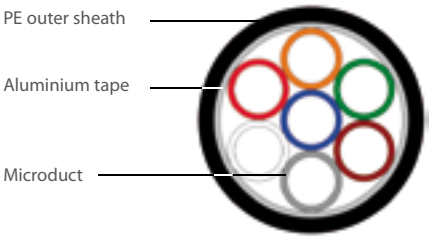
	Diameter mm	Weight kg / km	Max Tensile Load N	Min Dynamic Bend mm
12-72 Fibre	6.20	25	450	124

Fibre count	OM1 62.5/125	OM2 50/125	G.652 B singlemode	G.652 D Singlemode
12 fibres	HF062BMC12WNM6	HF050BMC12WNM6	HF008BMC12WNM6	HFD08BMC12WNM6
24 fibres	HF062BMC24WNM6	HF050BMC24WNM6	HF008BMC24WNM6	HFD08BMC24WNM6
36 fibres	HF062BMC36WNM6	HF050BMC36WNM6	HF008BMC36WNM6	HFD08BMC36WNM6
48 fibres	HF062BMC48WNM6	HF050BMC48WNM6	HF008BMC48WNM6	HFD08BMC48WNM6
60 fibres	HF062BMC60WNM6	HF050BMC60WNM6	HF008BMC60WNM6	HFD08BMC60WNM6
72 fibres	HF062BMC72WNM6	HF050BMC72WNM6	HF008BMC72WNM6	HFD08BMC72WNM6

Other fibre types available on request.

Brand-Rex Air Blown Fibre - Blolite+

Blolite+ External Protected MultiDucts



Available with 10 mm MicroDucts

Aluminium Moisture Barrier

MicroDuct Coloured for Identification

PE outer sheath

Product Data

Description	Diameter mm	Weight kg/km	Max Tensile Load N	Min Static Bend radius mm
1w 10mm (PER) – O	13.5	96	1000	135
4w 10mm (PER) – O	28.6	250	1500	290
7w 10mm (PER) – O	34.4	432	2700	345

PRODUCT DESCRIPTION:

To facilitate the installation of Blolite+ MicroCable, a range of Protected MicroDucts are available. These products are constructed with Blolite+ PER MicroDucts surrounded with a layer of coated aluminium tape and a Polyethylene outer sheath. This range of protected MicroDucts is optimized for Air Blown Cable installation and suitable for external duct applications.

PRODUCT PERFORMANCE:

Temp - Storage:	-40°c to +60°c
Temp – Installation:	-10°c to +70°c

Product Part Numbering

	10 mm
1 Way MultiDuct	21-0111-02
4 Way MultiDuct	21-0411-02
7 Way MultiDuct	21-0711-02

PRODUCT DESCRIPTION:
Within Blolite+ a range of plastic bodied pneumatic tube connectors are used for tube routing. The connectors have a variety of forms and are all rated for the maximum working pressure used on Blolite+ of 10 Bar. The connectors are installed with a simple push-pull technique and can be re-used several times.

Straight Connector:
For connecting 2 equal size microducts.

End Plug:
For blocking a straight connector when a later connection is required.

Gas Blocking 'T':
For use with resin to provide a gas blocking seal where required.

Straight Screw Connector:
For connecting 2 equal size microducts and eliminating movement at joint.

Bulkhead Connector:
For attaching a microduct to a panel or wall box.

8mm - 5mm Reducer:
To reduce from 8mm - 5mm MicroDuct at termination point.

End Stop:
For blocking of the end of a redundant tube or temporary sealing.

Dust Cap:
For preventing the ingress of dust during installation.

Termination Splitter / Stem Converter:
For use at the end of a duct route to divert fibres into different termination points.

Blolite+ Pneumatic Connectors

Pneumatic Tube Connectors

Product Part Numbering

Connector Type	3mm Microduct	5mm Microduct	8mm Microduct	10mm Microduct
Straight - Push/Pull	30-0301-00	30-0501-00	30-0801-00	30-1001-00
Straight - Screw Retention	-	30-0502-00	30-0802-00	-
End Stop	30-0304-00	30-0504-00	30-0804-00	30-1004-00
Connector End Plug	-	30-0505-09	30-0805-09	-
Bulkhead Mounted Connector	-	30-0506-09	-	-
Dust Cap	30-0307-05	30-0507-05	30-0807-05	30-1007-05
Gas Blocking 'T' Piece	-	30-0508-00	30-0808-00	-
8mm to 5mm Reducer	-	30-5801-00	-	-
Termination Fibre Diverter	-	-	30-0809-05	-
8mm to 5mm Stem Converter	-	30-5810-05	-	-

3mm Straight Connector:
For connecting 2 equal size microducts.

Radial Tube Cutter

Duct Stripping Tool
4.5mm - 29.00mm

Duct Stripping Tool
19.0mm - 40.00mm

Duct Testing Kit

Brand-Rex Air Blown Fibre
Tools

Product Part Numbering

	Part Number
Radial Tube Cutter	54-0100-00
Duct Stripping Tool 4.5mm - 29.00mm	54-0201-00
Duct Stripping Tool 19.00mm - 40.00mm	54-0202-00
Duct Stripping Tool Spare Blades	54-0300-00
Duct Testing Kit	50-0506-00

NOTES

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